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DOCTORAL THESIS

Closing Pandora's Box: A case for carbon market integrity after the global financial crisis: Conditioning ownership of the right to emit greenhouse gases in an Australian emissions trading scheme.

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CLOSING PANDORA'S BOX

A CASE FOR CARBON MARKET INTEGRITY AFTER THE GLOBAL FINANCIAL CRISIS: CONDITIONING OWNERSHIP OF THE RIGHT TO EMIT GREENHOUSE GASES IN AN AUSTRALIAN EMISSIONS TRADING SCHEME

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Those who cannot remember the past are condemned to repeat it

The Life of Reason, Volume 1: Reason in Common Sense
George Santayana

ABSTRACT

The Australian Government intends to introduce a price on carbon to create a clean energy economy at least-cost. The environmental aim will be achieved by creating a new market through an *emissions trading scheme* (*ETS*) – the carbon market. These are matters of public interest.

This thesis addresses the potential for abuse of an Australian ETS by entities that are not directly liable for the carbon price (*non-liable entities*). This thesis asserts that the gateway for this abuse is opened by unfettered ownership rights in the units of currency (*emissions units*) of the ETS – the statutory right to emit a defined amount of *greenhouse gases* (*GHG*).

Emissions units become commodities because embedded property rights in the ownership of the emissions unit allows transfer of the emissions units from one entity to another at an agreed price. Experience with trading of emissions units in the European Union and elsewhere reveals that abuse has occurred. Such abuse includes gaming the ETS legislation as well as theft, fraud, manipulation and excessive speculation. The absence of conditions on ownership of emissions units has facilitated such aberrant behaviours because non-liable entities may own emissions units without facing the same obligations faced by liable entities under the ETS.

This thesis argues the credibility of an Australia ETS depends on design rules that create a fair and orderly carbon market. Most importantly, a fair and orderly market would be one that enshrines a level playing field and is not susceptible to the problems experienced in operational emissions trading schemes and also in financial markets leading up to and throughout the *Global Financial Crisis* (*GFC*).

In order for Australia's carbon market to be fair and orderly, ownership of emissions units should be conditioned. All participants in the carbon market should face the same potential liability under the Australian ETS, and abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units, all independent of the achievement of the environmental objectives, should be arrested.

This thesis answers how an Australian ETS should arrest these aberrant behaviours, and builds upon existing legal rules by proposing new legislation for an Australian ETS as a carbon pricing mechanism. The recommended legislation addresses:

- the problem of fairness by proposing that non-liable entities would be deemed to be liable entities by synchronising ownership of emissions units and obligations to monitor, report and acquit emissions (called a *synchronisation rule*); and
- an orderly market by introducing an enhanced carbon market integrity regime.

New rules are also presented to reinforce the approaches by improving both ETS account opening procedures and discretions in the ETS regulator to test acceptability of participants.

DECLARATION

I, Damien Laurence Lockie, declare that the PhD thesis entitled '*Closing Pandora's Box: A case for carbon market integrity after the global financial crisis: conditioning ownership of the right to emit greenhouse gases in an Australian emissions trading scheme*' is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature

Date: 20 May 2011

PREFACE

For the last 20 years, we have lived in the midst of a global debate about climate change, presented to citizens in essence as the challenge to humankind to avoid dangerous anthropogenic interference with the world's climate system for the benefit of present and future generations. The present study accepts the scientific linkage between an observed increase in the warming of the world's climate system and man-made interference with Earth's atmosphere caused chiefly by the emissions of greenhouse gases.

Seldom are laws shaped without influences from society. This is particularly the case with responses to environmental concerns. Further, as noted by the Honourable Justice Brian J Preston, Chief Judge of the Land and Environment Court of New South Wales 'climate change law is still in its infancy.'[1] This thesis was researched and written in this rapidly evolving and complex political landscape – a landscape that will continue to shift. Daily media and events have and will continue to shape domestic policies to reduce emissions. While the law in this thesis is current as of 15 May 2011, it is the intention that the heart of this thesis – the design of property rights in emissions units and the integrity of emissions trading schemes – will remain core to a carbon pricing mechanism in Australia[2] and other countries in the coming years.

Since earliest times, scientists, philosophers, economists and jurists have all contributed to the debate and the tapestry of reflection about mankind's life on planet Earth. A wide and diversified variety of sources, classic and contemporary, have influenced the analysis and contributed to the propositions proffered in this thesis. All sources – legal, economic, scientific and philosophical – are collected in the bibliography, arranged in accordance with the *Australian Guide to Legal Citation*, Melbourne University Law Review Association, 3rd edition, 2010. Authority for propositions and specific reference to material from the sources are captured in chapter footnotes, and further collated in chapter references.

Damien Lockie

20 May 2011

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[1] Wayne Gumley and Trevor Daya-Winterbottom (eds), *Climate Change Law: Comparative, Contractual & Regulatory Considerations* (LawBook Co, 2009) vii.

[2] For example, it was reported in The Australian on 19 May 2011 that 'following a spate of overseas scams, Climate Change Minister Greg Combet recently called for an urgent briefing on the risks of carbon fraud in relation to the government's greenhouse registries.' Ben Packham, 'Organised crime rorting risk test for green schemes', *The Australian* 19 May 2011.

ACKNOWLEDGMENTS

Although this thesis is my own work (as it must be) there are others who have been influential.

Of course, to my supervisor, Professor Michael Weir, my special thanks. Thank you for the constant critical appraisal of my ideas and my language, the encouragement to articulate and defend my beliefs, and the push for me to publish. I could not have asked for a better supervisor.

Without the award to me of a Dean’s Scholarship by Professor Duncan Bentley, then Dean of the Faculty of Law at Bond University, this thesis may never have emerged. Duncan, I thank you. Your warm challenge to journey out of taxation law (an area to which I had devoted many years of professional practice) to research and teach in emissions trading law started this most enjoyable and intellectually stimulating phase of my life.

Many other people have afforded me the opportunity to discuss, debate and shape the ideas presented. I owe thanks to many professional colleagues, peers and former students. I thank particularly Dr Tony Beck, Executive Director of the Carbon Markets Institute, Professor Jim Corkery, Assistant Professor Dr Tina Hunter, Dr Iain Field, Dr Andrew McLucas, Miss Natasha Schott, Assistant Professor Dr Liz Spencer, Assistant Professor Dr Ned Wales, and Dr Bernie Walrut.

Throughout my candidature, family and friends have been of enormous support and encouragement, and I thank all of them too: especially my mother, Maureen Lockie, and my brother, Dr Darren Lockie, Miss Robyn Kedge, Ms Robyn Stoney, and my administrative assistants Mrs Jackie Brooks, Mrs Angela Ollenershaw and Mr Richard Hundt.

Most importantly, to Ms Astrid Edwards, my most strident critic, and the unfailing source of support, review, encouragement, inspiration and motivation to excel in this endeavour, I reserve the most special thanks.

Thanks to all those influences, the submission of this thesis marks the opening to a new expertise, and opportunity to participate in developing this new law in Australia.

This thesis is dedicated to:
my mother, Maureen Lockie
and
in memory, to my father, Laurie Lockie

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GLOSSARY
ABBREVIATIONS, ACRONYMS AND TERMS

In this thesis:

ACCRA means the proposed Australian Climate Change Regulatory Authority.

ACES Act means the *American Clean Energy and Security Act of 2009* (HR 2544) as passed by the United States of America House of Representatives on 26 June 2009 to amend the *Clean Air Act* (US) (*CCA*).

Australian ETS means Australian emissions trading scheme.

AEUs are Australian Emissions Units under the Carbon Pollution Reduction Scheme Bill 2010 (Cth) (*CPRS Bill*).

AFOLU projects are agriculture, forestry and other land-use projects.

AAUs are assigned amount units under the Kyoto Protocol.

ACCU is an Australian carbon credit unit under the Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth). ACCUs include Kyoto Australian carbon credit units and non-Kyoto Australian carbon credit units.

ANREU is the Australian National Registry of Emissions Units.

Arbitrage means activity that attempts to profit from mispricing opportunities between markets and between products within and between markets.

APA means the American Power Act of 2010, a discussion draft of United States legislation released on 12 May 2010 by Senator Joseph Lieberman and Senator John Kerry.

ARP means the Acid Rain Program introduced via amendments of the *Clean Air Act* (US) (*CAA*) by Title IV as added 15 November 1990, 42 USCS §7651ff.

ASIC is the Australian Securities and Investment Commission.

ASX is the Australian Stock Exchange.

BAAP means benchmark average auction price.

Bali Action Plan is Decision 1/CP.13, FCCC/CP/2007/6/Add.1*, recording an agreed action plan reached by the parties to the United Nations Framework Convention on Climate Change (*UNFCCC*) at their 13th meeting (Conference of the Parties (*COP*)) at Bali, 15 December 2007.

BAU means business as usual.

BCBS is the Basel Committee on Bank Supervision, which operates through the *Bank for International Settlements* (*BIS*).

BFCs are bromofluorocarbons.

C&C Act is the *Competition and Consumer Act 2010* (Cth) as amended.

CAA means the *Clean Air Act* (US) (42 USC 85: Title 42, Chapter 85).

CAMAC is the Corporations and Markets Advisory Committee.

Cancun Agreements are the agreements reached by the parties to the UNFCCC at COP 17 at Cancun, 10 December 2010.

Carbon leakage means the effect when a firm facing increased costs in one country due to an emissions price chooses to reduce production or to close or relocate production to another country with less stringent climate change policies.

Carbon price framework means the carbon price framework proposed for Australia by the Multi-Party Climate Change Committee (*MPCCC*) on 24 February 2011.

CCA means the Carbon Credits Administrator to be established by the Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth).

CCR Act means the *Climate Change Response Act 2002* (NZ).

CCS means carbon capture and storage.

CDM means Clean Development Mechanism projects under Article 12 of the Kyoto Protocol.

CEJAPA means the Bill for the Clean Energy Jobs and American Power Act of 2009 (S 1733) as introduced into the United States Senate on 30 September 2009.

CERs are certified emission reduction units generated by CDM projects under the Kyoto Protocol.

CFCs are chlorofluorocarbons, man-made organohalogen compounds, which together with *BFCs* are ozone depleting substances (*ODSs*).

CFI means the Carbon Farming Initiative to be introduced by the *Carbon Credits (Carbon Farming Initiative) Bill 2011* (Cth) (*CFI Bill*).

CFTC is the Commodity Futures Trading Commission of the United States of America.

CH_4 is methane.

CMI is the Carbon Market Institute.

CO_2 is carbon dioxide.

CO_2-e means carbon dioxide equivalent. CO_2-e is a standard measure that takes account of the different global warming potential (*GWP*) of different greenhouse gases (*GHG*) and expresses the cumulative effect in a common unit.

Commission is the Commission of the European Communities.

COP means the Conference of the Parties to the UNFCCC.

Copenhagen Accord is Decision 2/CP.15, UN document FCCC/CP/2009/11/Add.1, recording an accord reached by the parties to the UNFCCC at COP 15 at Copenhagen, 18 December 2009.

Corporations Act means the *Corporations Act 2001* (Cth) as amended.

Corporations Regulations means the *Corporations Regulations 2001* (Cth) as amended.

CPI is the consumer price index.

CPRS and *CPRS Bill* means the Carbon Pollution Reduction Scheme planned for Australia by the Carbon Pollution Reduction Scheme Bill 2010 (Cth). The CPRS Bill was the main Bill in a package of 11 bills that included Bills for the Carbon Pollution Reduction Scheme (Consequential Amendments) Bill 2010 (Cth), .Australian Climate Change Regulatory Authority Bill 2010 (Cth), Carbon Pollution Reduction Scheme (Charges – General) Bill 2010 (Cth), Carbon Pollution Reduction Scheme (Charges – Customs) Bill 2010 (Cth), Carbon Pollution Reduction Scheme (Charges – Excise) Bill 2010 (Cth), Carbon Pollution Reduction Scheme (CPRS Fuel Credits) Bill 2010 (Cth), Carbon Pollution Reduction Scheme (CPRS Fuel Credits) (Consequential Amendments) Bill 2010 (Cth), Carbon Pollution Reduction Scheme (Household Assistance) Bill 2010 (Cth), Customs Tariff Amendment (Carbon Pollution Reduction Scheme) Bill 2010 (Cth), and the Excise Tariff Amendment (Carbon Pollution Reduction Scheme) Bill 2010 (Cth).

CPRS Regulations means the Carbon Pollution Reduction Scheme Regulations 2009 (Consultation draft of 30 October 2009).

DCCEE means the Australian Government, Department of Climate Change and Energy Efficiency, reporting to the Minister for Climate Change and Energy Efficiency, the Hon Greg Combet AM MP (formerly the Department of Climate Change (*DCC*)).

Dodd-Frank Act is the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) (Public Law 111-203).

DSEWPC means the Australian Government, Department of Sustainability, Environment, Water, Population and Communities, reporting to the Minister for Sustainability, Environment, Water, Population and Communities, the Hon Tony Burke MP (formerly Department of Environment, Water, Heritage and the Arts (*DEWHA* reporting to the Minister for Environment, the Hon Peter Garrett AM, MP)).

Derivatives are financial products derived from or based upon an underlying commodity, such as an AEU.

DOE means a Designated Operational Entity within the CDM.

ECFI is the European Court of First Instance.

EEUs or *Eligible emissions units* are permit rights to emit GHG that can be surrendered against annual GHG emissions by entities who are CPRS liable entities (under Part 3 of the CPRS Bill) and comprise:

- *AEUs* – rights to emit GHG in Australia acquired by acquisition (through initial auction or subsequent trade) or by allocation; and
- *Eligible international emissions units* (*IEUs*) – these are Kyoto flexibility mechanism offset credits such as CERs, emission reduction units (*ERUs*) and removal units (*RMUs*), but do not include AAUs.

EIA is the Environmental Investigation Agency of the European Union (*EU*).

EITE means emissions-intensive trade-exposed and refers to that sector of the economy promised assistance under Part 8 of the CPRS Bill.

EPA means an Environment Protection Authority in Australia.

ERUs are emission reduction units generated by joint implementation (*JI*) projects under the Kyoto Protocol.

ETS means emission trading scheme.

EU is the European Union.

EUAs are European Emission Allowances under the European Union Emissions Trading Scheme (*EU ETS*).

European Commission is the Commission of the European Union.

EU ETS means the European Union Emissions Trading Scheme established by *Commission Directive (EC) No 87/ 2003* of 25 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Commission Directive 96/61/EC [2003] OJ L 275, 32. Relevant amending directives, decisions and regulations include:

- *Commission Directive (EC) No 101/2004* of 13 November 2004 establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms [2004] OJ L 338/18;
- *Commission Decision (EC) No 780/2006* of 16 November 2006 on avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Commission Directive 2003/87/EC of the European Parliament and the Council [2006] OJ L 316/12 notified under C(2006) 5362;
- *Commission Regulation (EC) No 994/2008* of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council;
- *Commission Directive (EC) No 29/2009* of the European Parliament and the Council of 23 April 2009 amending Commission Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community [2009] OJ L 140/63; and
- *Commission Regulation (EU) No 1031/2010* of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Commission Directive 2003/87/EC of the European Parliament and the Council establishing a scheme for greenhouse gas emission allowance trading within the Community [2010] OJ L 302/1.

FCA is the Federal Court of Australia. *FCFCA* is the Full Court of the Federal Court of Australia.

Financial intermediaries means all non-liable participants in the carbon market, and includes financial institutions, financial institutions that are globally systemic (*G-SIFIs*), hedge funds, investors, and speculators.

Futures (and *Forward Contracts*) are 'agreements to buy or sell assets at a certain time in the future for a price that is fixed today.'[1] The price for the underlying asset to be delivered on the expiration or delivery date is called the futures price. The seller of the underlying asset has a short position in the futures contact.

Gaming means activity that attempts to profit from uncertainties in and differences in interpretation of legislation in a State and between States.

Gaunaut Review means the *Final Report to the Commonwealth, State and Territory Governments of Australia* by the Garnaut Climate Change Review.

GEDO is the Greenhouse and Energy Data Officer, the regulator under the *National Greenhouse and Energy Reporting Act 2007* (Cth) (*NGER Act*).

GHG means greenhouse gases, and is defined in the CPRS Bill (pointing to the NGER Act) to include emissions in CO_2-e of:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- synthetic GHG, being:
  - Sulphur hexafluoride (SF_6);
  - Hydrofluorocarbons (*PFCs*) of the 13 types to be specified in Table 1 of s 7B(2) of the NGER Act; and
  - Perfluorocarbons (*HFCs*) of the 7 types to be specified in Table 2 of s 7B(3) of the NGER Act; and
- a prescribed gas.

GHG Protocol 2004 means the Protocol published under that name by the World Business Council for Sustainable Development (*WBCSD*) and the World Resources Institute (*WRI*).

[1] Alex Frino and Elvis Jarnecic, *Introduction to Futures and Options Markets in Australia* (Pearson Prentice Hall, 2005) 1.

GHGPRIP means the Greenhouse Gas Pollution Reduction and Investment Program foreshadowed by the APA.

Government means the political entity of a country that exercises effective sovereignty over its territory and population.

G-SIFIs are financial institutions that are globally systemic.

GST is tax imposed by the *A Tax System (Goods and Services Tax) Act 1999* (Cth).

GWP means global warming potential. The GWP of any GHG is specified in the *National Greenhouse and Energy Reporting Regulations 2008* (*NGER Reporting Regulations*).

GWPRIP means the Global Warming Pollution Reduction and Investment Program foreshadowed by CEJAPA.

GWPRP means the Global Warming Pollution Reduction Program foreshadowed by the ACES Act.

HCA is the High Court of Australia.

HCFCs or *HFCs* are hydrofluorocarbons.

IET means international emissions trading.

IETA is the International Emissions Trading Association.

IEUs are an eligible international emissions unit under the CPRS Bill (CERs, ERUs and RMUs).

IMF is the International Monetary Fund.

IPCC is the Intergovernmental Panel on Climate Change, established by the United Nations Environment Program (*UNEP*) and the World Metrological Organisation (*WMO*).

JI means Joint Implementation projects under the Kyoto Protocol.

Kyoto Protocol means the Protocol to the UNFCCC, opened for signature 16 March 1998, UN Doc. FCCC/CP/1997/7/Add.1 December 10, 1997 (entered into force 16 February 2005) [37 ILM 22].

LEPID means the Liable Entities Public Information Database under the CPRS Bill.

Liable entity means a person liable under the CPRS Bill.

LULUCF means land use, land use change, and forestry.

Marrakesh Accords are UN Doc. FCCC/CP/2001/13/Add.2 January 21, 2002, the agreements formally adopted at the first conference of the parties to the Kyoto Protocol in December 2005.

MDP is the Markets Disciplinary Panel established by ASIC.

Minister means the Minister for the time being who is Minister for Climate Change and Energy Efficiency. As of 15 May 2011, the Minister is the Hon Greg Combet AM MP.

MNC means a multi-national corporation.

MOP means the Meetings of the Parties to the Kyoto Protocol.

MPCCC means the Multi-Party Climate Change Committee established 27 September 2010 by Prime Minister the Hon Julia Gillard MP, Deputy Prime Minister and Treasurer the Hon Wayne Swan MP and the Minister for Climate Change and Energy Efficiency the Hon Greg Combet AM MP.

N is nitrogen.

NAPs are National Allocation Plans for the purposes of the EU ETS.

NCOS is the National Carbon Offset Standard, effective 1 July 2010 published by DCCEE.

NETF means the National Emissions Task Force.

NF_3 is nitrogen trifluoride.

NGER Act means the *National Greenhouse and Energy Reporting Act 2007* (Cth), Act No 175 of 2007, as amended.

NGER Measurement Determination means *National Greenhouse and Energy (Measurement) Determination 2008*, Legislative Instrument F2008L02309, as amended, made pursuant to the NGER Act.

NGER Reporting Regulations means *National Greenhouse and Energy Reporting Regulations 2008*, Select Legislative Instrument 127 of 2008, as amended, made pursuant to the NGER Act.

NO is nitric oxide.

N_2O is nitrous oxide.

NO_x are oxides of nitrogen.

Non-liable entity means a person or entity to which no obligations attach under an ETS. A non-liable entity may hold a right to emit GHG (an emissions unit) without any liability commensurate to obligations of liable entities to monitor, report and acquit GHG emissions under the ETS.

NPI is the National Pollutant Inventory maintained by DSEWPC.

NZ ETS means the New Zealand emissions trading scheme introduced into the CCR by the *Climate Change Response (Moderated Emissions Trading) Amendment Ac 2009* (NZ) (enacted as Act No 57 of 2009) as amended.

NZUs are New Zealand Units under the NZ ETS.

O_2 is oxygen.

O_3 is ozone.

ODSs mean ozone depleting substances. ODSs include BFCs and CFCs and other elements such as hydroxyl (*OH*), atomic chlorine (*Cl*), and atomic bromine (*Br*).

OTC means a private treaty or over-the-counter transaction.

PFCs are per-fluorocarbons.

REDD means the United Nations (*UN*) programme for reducing emissions from deforestation and forest degradation and *REDD+* means the UN programme that goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

Registry account is an ANREU account under the Australian National Registry of Emissions Units Bill 2011 (Cth) for holding ACCUs (and within the CPRS/carbon price framework for holding EEUs).

Regulated GHG participants mean regulated greenhouse gas market participants.

Review Update means the *2011 Review Update* to the Garnaut Review requested by the MPCCC (in progress, due 31 May 2011).

RMUs are removal units generated under the Kyoto Protocol.

Scope 1, 2 or 3 emissions means either scope 1, 2 or 3 emissions as specified in the GHG Protocol 2004 as follows:

- Scope 1 emissions: Direct GHG emissions (excluding emissions not covered by the Kyoto Protocol) occurring from sources that are owned or controlled by the entity, and emissions from chemical production in owned or controlled process equipment. Excludes direct CO_2 emissions from the combustion of biomass;
- Scope 2 emissions: Electricity indirect GHG emissions from the generation of purchased electricity consumed by the entity and physically occurring at the facility where electricity is generated. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the entity;
- Scope 3 emissions: Other indirect GHG emissions (an optional reporting category allowing for the treatment of all other indirect emissions that are a consequence of the activities of the entity) that occur from sources not owned or controlled by the entity. Some examples of scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services.

Secondary market trades are spot and future trades of emissions rights, derivatives and futures that occur in a market made possible by, but outside, the CPRS framework.

SEI is the Stockholm Environment Institute.

SF_6 is sulphur hexafluoride.

SO_2 is sulphur dioxide.

Speculation means 'the purchase of a good for later re-sale rather than for use, or the temporary sale of a good with the intention of later re-purchase – in the hope of profiting from an intervening price change.'[2]

Spot trades are on-market trades in Australia of AEUs which when registered result in ownership change under the CPRS Bill, and in other markets, on-market trades of EUAs, NZUs, etc.

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[2] J Hirshleifer, 'The Theory of Speculation Under Alternative Regimes of Markets' (1977) 32 *The Journal of Finance* 975, 975.

State and *States* means the state as a person of international law, within Article 1 of the *Montevideo Convention on the Rights and Duties of States*, enacted 26 December 1933 (entered into force 26 December 1934).

Synchronisation rule means provisions in an ETS designed to tie ownership of the right to emit GHG with liability under the ETS.

t means tonnes.

TGET is the Prime Ministerial Task Group on Emissions Trading.

UEAs are United States emission allowances proposed under the ACES Act, CEJAPA and the APA.

UN is the United Nations.

UNGA is the General Assembly of the United Nations.

UNDP is the United Nations Development Programme.

UNEP is the United Nations Environment Programme.

UNFCCC means the United Nations Framework Convention on Climate Change, opened for signature 9 June 1992, 1771 UNTS 165 (entered into force 21 March 1994) [31 ILM 848].

US or *United States* is the United States of America.

US EPA means the United States Environment Protection Agency.

US ETS means a proposed federal ETS in the US.

VAT is value added tax, equivalent to GST.

VCS is the Voluntary Carbon Standard 2007.1 of the Voluntary Carbon Standard Association, a specification for the project-level quantification, monitoring, reporting, validation and verification of voluntary emission reduction units generated by voluntary abatement action.

VERs are voluntary emission reduction units or credits.

WBCSD is the World Business Council for Sustainable Development.

WMO is the World *Meteorological* Organisation.

WTO is the World Trade Organisation.

WRI is the World Resources Institute.

1936 Tax Act is the *Income Tax Assessment Act 1936* (Cth) as amended.

1997 Tax Act is the *Income Tax Assessment Act 1997* (Cth) as amended.

INTRODUCTION

1. OVERVIEW

1.1 Introduction to the problem

The Australian Government intends to introduce a price on carbon to create a clean energy economy at least-cost. The environmental aim will be achieved by creating a new market through an *emissions trading scheme* (*ETS*) – the carbon market.

This thesis addresses the potential for abuse of an Australian ETS by entities that are not directly liable for the carbon price (*non-liable entities*). This thesis asserts that the gateway for this abuse is opened by unfettered ownership rights in the units of currency (*emissions units*) of the ETS – the statutory right to emit a defined amount of *greenhouse gases* (*GHG*).[1]

Emissions units become commodities because the right to emit GHG is commodified by ETS design.[2] Property rights are embedded in the ownership of the emissions unit, with the ability to freely transfer the emissions unit from one entity to another at an agreed price.

Experience in emissions trading in the European Union and elsewhere reveals that abuse has occurred. Such abuse includes gaming the ETS legislation as well as theft, fraud, manipulation and excessive speculation. The absence of conditions on ownership of emissions units has facilitated such aberrant behaviours because non-liable entities may deal in emissions units without facing obligations faced by liable entities under the ETS.

1.2 Why the problem is important

The issue of the scope of the ownership rights embedded in the emissions unit is important because it goes to the credibility of an Australian ETS and to the legislative objective of reducing national emissions. These are matters of public interest.

This thesis argues the credibility of an Australia ETS depends on design rules that create a fair and orderly carbon market.

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[1] Greenhouse gases (*GHG*) are given a statutory definition. GHGs comprise carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), per-fluorocarbons (PFCs) (13 types) and hydro- fluorocarbons (HCFCs) (7 types).

[2] Mack (1989) states that 'the process of commodification leads an agent to … engage in activities … not for the sake of the value that agent directly attaches to those … activities, … but rather for the sake of what the market offers in return.' Eric Mack, 'Dominos and the Fear of Commodification' in John W Chapman and J Roland Pennock (eds), *Markets and Justice (NOMOS XXXI)* (New York University Press, 1989) 198, 199.

Fair and orderly carbon markets create a level playing field and are not susceptible to the problems experienced in operational emissions trading schemes and also in financial markets leading up to and throughout the *Global Financial Crisis* (*GFC*).

The essence of a fair market is that no participant in the market has an advantage. The essence of an orderly market is one free of aberrant behaviours that disturb its objective and operation. In order for Australia's carbon market to be fair and orderly, ownership of emissions units should be conditioned. All participants should face the same potential liability under the Australian ETS, and abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units, in disregard of the environmental aims, should be arrested.

1.3 How this thesis addresses the problem

The environmental objective of pricing carbon is to achieve an overall reduction in national emissions. The design of an ETS defines which entities and which emissions will be covered by the scheme, creating a subset of national emissions to be reduced. Under the most recent design rules proposed for an Australia ETS, non-liable entities would not be required to monitor, report and acquit their emissions. This contrasts to the requirements placed on liable entities.

This thesis addresses the problem of fairness by proposing new rules that would result in the determination of liability in the case of non-liable entities, based on ownership of emission units and direct emissions above a specified threshold. Non-liable entities would be deemed to be liable entities by synchronising ownership of emissions units and obligations to monitor, report and acquit emissions (called a *synchronisation rule*).

This thesis addresses an orderly market by introducing an enhanced carbon market integrity regime. New legislation is presented that would:

- increase regulatory oversight, including giving powers to a carbon market advisory committee and to the regulator to intervene in the carbon market; and
- require carbon market participants to hold a GHG permit before trading.

In order to reinforce the recommended legislative changes, new account opening procedures in the ETS registry and discretions in the regulator to test whether participants are fit and proper persons are also presented.

2. METHODOLOGY

There are a variety of potential solutions that governments (*States*)[3] may adopt to influence citizen behaviour and GHG emissions. These include: command and control regulation that limits emissions at source, price mechanisms such as taxes that seek to close the gap between marginal social cost and marginal private cost, and quantity measures such as cap-and-trade emissions trading schemes. This thesis is concerned only with the latter approach.[4]

The creation of cap-and-trade GHG emissions trading schemes at the national level is a relatively new phenomenon – the most prominent example is the *European Union Emissions Trading Scheme* (*EU ETS*)[5] operational from 1 January 2005.[6] While the theory of emissions trading and regulatory intervention is well developed, ETS oversight and integrity is an emerging field of interest. More importantly for this thesis, governments, regulators, academics and practitioners have only just begun to learn from the mistakes made to date and improve the design of real world, operational emissions trading schemes.

This is a legal thesis, not an economic thesis. This thesis does not critique or comment on the economics of emissions trading. Unfettered ownership of the right to emit GHG is studied using a comparative law methodology, which is a well-established academic method for comparing legal systems and laws.[7]

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[3] The term *States* in used in this thesis to refer to the government as a person of international law, within art 1 of the *Montevideo Convention on the Rights and Duties of States*, enacted 26 December 1933 (entered into force 26 December 1934). Art 2 of the Montevideo Convention provides that a federal state shall constitute a sole person in the eyes of international law. In this thesis the term *government* references the political entity of a State that exercises effective sovereignty over its territory and population.

[4] This thesis does not consider other approaches such as hybrid cap-and-trade schemes (see, eg, Georg Grull and Luca Taschini, 'Cap-and-trade properties under different hybrid scheme designs' (2011) 61 *Journal of Environmental Economics and Management* 107), cap-and-share and cap-and-dividend schemes (see, eg, Feasta, 'Cap & Share' (Policy Brief, The Foundation for the Economics of Sustainability, May 2008)) or sky trusts (see, eg, Peter Barnes, *Who Owns the Sky? Our Common Assets and the Future of Capitalism* (Island Press, 2001)). This thesis also does not consider the framework for trading by nations of *assigned amount units* (*AAUs*).

[5] *Commission Directive 2003/87/EC* of the European Parliament and of the Council of 25 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC [2003] OJ L 275,32 (as amended).

[6] This thesis is focused on national GHG emissions trading schemes, yet one of the earliest and longest running ETS is the Acid Rain Program (*ARP*) (*Clean Air Act* (US) (42 USC 85: Title 42, Chapter 85) (*CCA* or *Clean Air Act*), Title IV), which introduced emissions trading in sulphur dioxide (SO_2) in the United States of America (*US*).

[7] Konrad Zweigert and Hein Kötz, *Introduction to Comparative Law* (Tony Weir trans, Clarendon Press,

First, this thesis undertakes an investigation of the language (and the absence of language) of commodification of the right to emit GHG in the proposed Australian ETS,[8] and by comparison, emissions trading schemes:

- operational in:
  - the European Union (*EU*) (the EU ETS); and
  - New Zealand (the *New Zealand Emissions Trading Scheme* (*NZ ETS*)); and
- proposed in the United States of America (*US*) (*US ETS*).[9]

The comparative analysis is based on laws and proposals as of 15 May 2011.

The objective of this investigation is to establish the functional equivalence of the right to emit GHG in each of these cap-and-trade emissions trading schemes. As stated by Zweigert and Kötz (1998):

> The basic methodological principle of all comparative law is that of functionality. From this basic rule stem all the other rules which determine the choice of laws to compare, the scope of the undertaking, the creation of a system of comparative law, and so on. Incomparables cannot usefully be compared, and in law the only things which are comparable are those which fulfil the same function. … The question to which any comparative study is devoted must be posed in purely functional terms.[10]

Collins and Palmer (2008) estimated that the Australian carbon market would be approximately one-fifth the size of the EU ETS, and almost nine times the size of the NZ ETS.[11] If implemented, the US ETS would be the largest carbon market in the world, and approximately four times larger than the EU ETS.

Introductory chapters demonstrate (despite differences in size) a functional equivalence in the cap-and-trade emissions trading schemes examined and in the right to emit GHG,

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3rd revised ed, 1998).

[8] A complex of legislation (most notably environmental, health and renewable energy laws) and a common law that is designed to protect citizens and the Australian environment from harm already exists at Federal and State level in Australia. It is outside the scope of this thesis to describe those laws. This thesis notes that the context of the broader Australian regulatory (and political) landscape sets the background for ETS design.

[9] The US emissions trading scheme would be a federal cap-and-trade scheme. It was proposed in the *American Clean Energy and Security Act of 2009 (ACES Act)* and in the American Power Act of 2010 (*APA*) (collectively, *US ETS*). The APA is discussion draft legislation, released for comment by US Senators Joseph Liebermann and John Kerry on 12 May 2010.

[10] Zweigert and Kötz, above n 7, 34.

[11] Anthony Collins and Sally Palmer, 'The Role of Financial Markets in Emissions Trading' (2008) 27 *Australian Resources and Energy Law Journal* 41, 42.

referencing an identity in principle, policy and legislative rule. Australia, the EU and the US are federations. Australia, New Zealand, the EU and the US are States all bound by a common history and heritage, and all are market-based economies. Accordingly, the rules for each of the emissions trading schemes chosen for examination are 'the laws of peoples at similar stages of cultural and economic development'[12] and the policy objective of each of them is identical, viz, to provide the market-based mechanism for the reduction of GHG emissions.

The concepts surrounding unfettered ownership embodied in these emissions trading schemes is legitimately the object of comparable examination.[13]

This thesis analyses the legislative rules of each ETS that create the right to emit GHG, and hence are indicative of commodification. This thesis also analyses the legislative rules of each ETS and other relevantly associated legislation, such as the corporations law, which operate (or are intended to operate) in a manner that may restrict free transfer of the emissions unit.

Zweigert and Kötz state:

> The process of comparison proper starts only when the reports on the different legal systems have been completed. To present such reports before the comparison proper begins is an established method of research and a proven way of constructing works on comparative law. Separate reports should be offered for each legal system … and they should be objective, that is, free from any critical evaluation, though containing all significant qualifications or modifications. Whoever reads or uses a work on comparative law must be made familiar with the basic material, or he will be in no position to make the necessary comparisons.[14]

Before turning to a comparison (the final step of the methodological process),[15] the experiences of, and lessons learned from, operational emissions trading schemes are presented. Examples and case studies are used to illustrate the behaviour that ETS design may permit. Examining the flaws in emissions trading schemes provides insights into the connection that should exist between ownership of emissions units and liability

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[12] Zweigert and Kötz, above n 7, 3.
[13] Ibid 40. 'The comparatist can rest content if his researches through all relevant material lead to the conclusion that the systems he has compared reach the same or similar practical results.' See also Tina Hunter, 'Comparative Law as an Instrument in Transnational Law: the example of petroleum regulation' (2009) 21 *Bond Law Review* 42; Mark van Hoecke, 'Deep Level Comparative Law' in Mark van Hoecke (ed), *Epistemology and Methodolgy of Comparative Law* (Hart Publishing, 2004) .
[14] Zweigert and Kötz, above n 7, 43.
[15] Ibid 2.

under the Australian ETS. The observed behaviour, together with the post-GFC enhanced regulatory supervision and carbon market integrity regime form, as Zweigert and Kötz term, 'the system produced by comparative law.'[16]

The comparison[17] then is used as justification for the suggested improvements to the Australian ETS posited by this thesis. The comparison demonstrates that the right to emit GHG is fundamentally identical in each of the emissions trading schemes, and:

- a synchronisation rule would work in all emissions trading schemes; and
- an enhanced carbon market integrity regime emerging in the EU and the US can be adopted in the Australian ETS.

3. EMISSIONS TRADING THEORY: AN INTRODUCTION

The economic theory of emissions trading is outside the scope of this thesis. However, an introduction to the economic theory of emissions trading is outlined.

3.1 The origins of emissions trading theory

The theory for applying economic market-based instruments to pollution began with the work of Pigou (1920) on setting taxation equal to the value of negative environmental externalities.[18]

In economic theory, an externality is a cost or a benefit that is not reflected in the price of a good or service. GHG emissions are considered to be a negative externality,[19] as the negative costs to the environment (e.g. incurred from emissions from electricity generation) are not reflected in the cost of the final product (i.e. electricity used in an industrial factory).

After Pigou, Coase (1960) argued that externalities could be addressed by creating property rights and facilitating a system for those rights to be traded.[20]

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[16] Ibid 45. 'The system produced by comparative law …: its concepts identify the demands that a particular slice of life poses for the law in all systems where the social and economic conditions are similar and provide a realistic context within which to compare and contrast the various solutions.'

[17] Ibid 44. The comparison aims to 'bring out the differences between the actual solutions [and …] involves adopting a new point of view from which to consider all the different solutions.'

[18] Arthur Cecil Pigou, *The Economics of Welfare* (Macmillan and Co, first published 1920, Cosimo Classics ed, 2005).

[19] James E Meade, *The Theory of Economic Externalities* (A W Sijtoff, 1973).

[20] Ronald H Coase, 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1.

Subsequent work by Crocker (1966), Dales (1968), Baumol and Oates (1971), Montgomery (1972) and Tietenberg (1985), among others, demonstrated how emissions trading schemes could be an efficient and low-cost way of managing pollution.[21]

3.2 Emissions trading theory

It should be noted that there are several different types of market-based mechanisms – cap-and-trade emissions trading, baseline and credit emissions trading, carbon taxation, and a hybrid approach (a combination of trading and taxation). This thesis is only concerned with the cap-and-trade approach.

A cap-and-trade ETS is a market-based mechanism through which GHG emissions can be reduced if the cap for such scheme is fixed or reducing. Such a scheme facilitates flexibility in what sector of the economy emission reductions occur, and therefore prevents sharp limitations on economic activity. The scheme establishes a market in which GHG emission allowances can be bought and sold by liable entities – and others. The nature of the market created is at the heart of this thesis.

There are three critical aspects of an ETS:

- establishing a cap (maximum limit) on emissions;
- defining ‘emission entitlements’ as a commodity and assigning property rights; and
- allowing the commodity to be traded.

An emissions target establishes the ‘cap’ in a cap-and-trade scheme. The cap represents a numerical emission reduction objective for covered entities, and is most often measured as the reduction of a percentage of a base year’s emission level within a period of time (i.e. five per cent reduction below 2000 levels by 2020). The cap normally would be beyond the projected *business as usual* (*BAU*) emissions trajectory.

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[21] Thomas D Crocker, 'The Structuring of Atmospheric Pollution Control Systems' in Harold Wolozin (ed), *The Economics of Air Pollution* (Norton, 1966) ; William J Baumol and Wallace E Oates, 'The Use of Standards and Prices for Protection of the Environment' (1971) 73 *Swedish Journal of Economics* 42; John H Dales, *Pollution property & prices* (University of Toronto Press, 1968); W David Montgomery, 'Markets in licenses and efficient pollution control programs' (1972) 5 *Journal of Economic Theory* 395; Tom H Tietenberg, 'Emissions trading: an exercise in reforming pollution policy' (Policy Brief, Resources for the Future, 1985). The Third Assessment Report of the Intergovernmental Panel on Climate Change (*IPCC*) overviews the development of such schemes: Intergovernmental Panel on Climate Change, 'Third Assessment Report Climate Change 2001: Working Group III Mitigation' (3rd Assessment Report, Intergovernmental Panel on Climate Change, 2001), ‘Chapter 6: Policies, measures and instruments.’

Each created emission unit represents *one tonne* (*1t*) of *carbon dioxide equivalent emissions* (CO_2-*e*).[22] Property rights are embodied in the ownership of the emissions unit, with the ability to freely transfer this unit from one legal entity to another, at a price agreed by the parties.

Eligible emissions units have a commercial value. This means that an entity (normally a firm) can either choose to abate emissions, or purchase credits from other entities that face lower abatement costs. This allows abatement to occur at the lowest cost – thereby enabling stronger and deeper emission reductions to be set.

As Tietenberg (2006) explained:

> When emissions permits are transferable, those plants that can control most cheaply find it in their interest to control a high percentage of their emissions because they can sell the excess permits. Buyers can be found whenever it is cheaper to buy permits for use at a particular plant than to install more control equipment. Whenever an allocation of control responsibility is not cost-effective, further opportunities for trade exist. When all such opportunities have been fully exploited, the allocation would be cost-effective.[23]

For example, if liable Entity A is able to reduce its total emissions[24] below the number of units that it possesses, then it may sell its excess allowances for a price. Liable Entity B, which may not have been able to reduce its emissions below the number of permits it possesses, is then able to buy permits from Entity A. The total number of emissions units reduces over the life of the scheme, decreasing the emissions cap and driving further emissions reductions by constrained supply of emissions units and increasing prices.

Under market-based approaches, the government cannot control both the price and the quantity of emissions. A cap-and-trade ETS allows the government to control the quantity of emissions, but not the price of emissions reduction units. This contrasts with a carbon tax, which would enable a government to control the price, but not the quantity, of emissions.

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[22] Carbon dioxide equivalence (CO_2-e) is a standard measure that takes account of the different global warming potential (GWP) of different GHG and expresses the cumulative effect in a common unit.

[23] Tom H Tietenberg, *Emissions Trading: Principles and Practice* (Resources for the Future, 2nd ed, 2006) 27. See also Martin L Weitzman, 'Prices vs. Quantities' (1974) 41 *Review of Economic Studies* 477.

[24] In order for a cap-and-trade ETS to be effective, accurate monitoring, reporting and verification of emissions must take place. Controls over such recording and accounting processes provide a degree of market oversight to the system – emissions reporting has to be reviewed to assure that reductions are taking place. See, eg, *National Greenhouse and Energy Reporting (Audit) Determination 2009* and *National Greenhouse and Energy Reporting (Auditor Registration) Instrument 2010.*

3.3 Moving theory into practice

The *Kyoto Protocol*[25] to the *United Nations Framework Convention on Climate Change* (*UNFCCC*)[26] encourages international emissions trading as one of three market-based mechanisms to reduce global emissions.[27] Under the Kyoto Protocol, if an Annex B party[28] reduces its emissions below its Kyoto assigned amount, it can sell surplus assigned amount units to another Annex B party. The two other market-based mechanisms allowed under the Kyoto Protocol are also trading schemes – the *Clean Development Mechanism* (*CDM*) and *Joint Implementation* (*JI*) enable credits from emissions reduction activities in one State to be used to meet the target of another State.

Emissions trading has been the market mechanism of choice for a series of Australian Governments.[29] An ETS for Australia, specifically tailored to the Australian economy, was outlined in the 2008 *Garnaut Climate Change Review* (*Garnaut Review*),[30] and also by the then *Department of Climate Change* (*DCC*) in the 2008 *Green Paper*[31] and the 2008 *White Paper*.[32]

Professor Ross Garnaut succinctly outlined the purpose of an Australian ETS:

> To mitigate climate change effectively, a limit must be placed on

[25] *Kyoto Protocol,* opened for signature 16 March 1998, UN Doc. FCCC/CP/1997/7/Add.1, 10 December 1997 [being the Report of the Conference of the Parties on its third session, held at Kyoto from 1 to 11 December 1997] (entered into force 16 February 2005).

[26] *United Nations Framework Convention on Climate Change,* opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994).

[27] See also Michael Grubb et al, 'Global carbon mechanisms: lessons and implications' (2011) 104 *Climatic Change* 539.

[28] Parties listed in Annex B of the Kyoto Protocol are States recognised as developed economies or economies in transition to development.

[29] Early work in Australia included six reports by the Australian Greenhouse Office: Australian Greenhouse Office Australian Government, 'National Emissions Trading Discussion Papers 1 – 6' (1999-2002) and Department of Prime Minister and Cabinet Australian Government, 'Report of the Task Group on Emissions Trading' (Report, Australian Government, Prime Ministerial Task Group on Emissions Trading, 2007). In 2006 the *United Kingdom* (*UK*) Treasury commissioned the *Economics of Climate Change: The Stern Review* (2007) (the *Stern Review*). The Stern Review represented the first economy-wide study of the economics of climate change, and negative GHG externalities. The Stern Review recommended emission trading to be the policy instrument of choice.

[30] Ross Garnaut, 'Final Report to the Commonwealth, State and Territory Governments of Australia' (Report, Garnaut Climate Change Review, 30 September 2008).

[31] Department of Climate Change Australian Government, 'Carbon Pollution Reduction Scheme Green Paper' (Discussion Paper, Australian Government, Department of Climate Change, 16 July 2008).

[32] Department of Climate Change Australian Government, 'Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper' (Policy Paper, Australian Government, Department of Climate Change, 15 December 2008). For a fuller history, see Martijn Wilder and Louisa Fitz-Gerald, 'Overview of Policy and Regulatory Emissions Trading Frameworks in Australia' (2008) 27 *Australian Resources and Energy Law Journal* 1 and Nicola Durrant, *Legal Responses to Climate Change* (Federation Press, 2010).

> rights to emit greenhouse gases to the atmosphere, and this must be reduced over time to the level that prevents any net accumulation in the atmosphere. Australia's limit will represent an agreed share of a global limit.
> An emissions permit represents a tradable instrument with inherent value that can be exchanged between sellers and buyers in an emissions permit market. This enables the movement of permits about the economy to their highest value (or most economically efficient) use. It does this while ensuring the integrity of the volumetric control, or emissions limit, imposed in order to satisfy the policy objectives of climate change mitigation.[33]

4. AUSTRALIAN CONTEXT: INTRODUCING A CARBON PRICE

On 24 February 2011 the *Multi-Party Climate Change Committee* (the *MPCCC*)[34] chaired by Australia's Prime Minister the Hon Julia Gillard MP proposed a carbon price framework for Australia starting 1 July 2012 with 'a fixed price (through the issuance of fixed price units within an emissions trading scheme) before converting to a cap-and-trade emissions trading scheme.'[35] The carbon price framework as at 15 May 2011 comprises:[36]

- Communiqué of the MPCCC dated 24 February 2011, 'Carbon Price Mechanism;' and
- Press Release GC55/11 dated 23 March 2011 by the *Minister for Climate Change and Energy Efficiency*, the Hon Greg Combet AM MP (*Minister*) 'Moving to a clean energy future – the next steps.'

The object of this thesis is not to write or rewrite the whole design rules for an Australian ETS.

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[33] Garnaut, Final Report, above n 30, 322.

[34] Prime Minister the Hon Julia Gillard MP, Deputy Prime Minister and Treasurer the Hon Wayne Swan MP and Minister for Climate Change and Energy Efficiency the Hon Greg Combet AM MP, 'Prime Minister establishes Climate Change Committee' (Media Release, 27 September 2010). 'Carbon pollution' is a short-hand expression for atmospheric emissions of *greenhouse gases* (*GHG*).

[35] Multi-Party Climate Change Committee, 'Carbon Price Mechanism' (Communiqué of the Multi-Party Climate Change Committee, 24 February 2011) (*MPCCC*). See also Frank Jotzo, 'Carbon pricing that builds consensus and reduces Australia's emissions: Managing uncertainties using a rising fixed price evolving to emissions trading' (CCEP Working Paper 1104, Centre for Climate Economics and Policy, Crawford School of Economics and Government, The Australian National University, 15 March 2011).

[36] The MPCCC has met six times (7 October 2010, 10 November 2010, 21 December 2010, 18 February 2011, 18 March 2011 and 19 April 2011) and released three papers (Multi-Party Climate Change Committee, 'Carbon Price Mechanism' (Communiqué of the Multi-Party Climate Change Committee, 24 February 2011); Multi-Party Climate Change Committee, 'Status of Global Mitigation Action: Current targets and policies in key countries' (Communiqué of Multi-Party Climate Change Committee, 10 November 2010); Multi-Party Climate Change Committee, 'Climate change overview' (Communiqué of Multi-Party Climate Change Committee, 10 November 2010)). The seventh meeting is 17 May 2011.

In the absence of detail about the carbon price framework and as a model guide to the design of an Australian ETS as the carbon pricing mechanism, this thesis examines the Carbon Pollution Reduction Scheme (*the CPRS*),[37] an ETS originally planned[38] to be introduced[39] by the Carbon Pollution Reduction Scheme Bill 2010 (Cth) (*CPRS Bill*).

This thesis builds upon the legal rules in the CPRS Bill.[40]

The thesis answer to how an Australian ETS should deal with non-liable entities is presented by specific amendments proposed for the CPRS Bill, designed to fit the CPRS Bill (but also useable in any other ETS designed as the carbon pricing mechanism).

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[37] The Carbon Pollution Reduction Scheme (*CPRS*) comprised a package of 11 separate legislative bills: Carbon Pollution Reduction Scheme Bill 2010 (Cth) (*CPRS Bill*), Australian Climate Change Regulatory Authority Bill 2010 (Cth); Carbon Pollution Reduction Scheme (Charges-Customs) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (Charges-Excise) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (Charges-General) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (Consequential Amendments) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (CPRS Fuel Credits) (Consequential Amendments) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (CPRS Fuel Credits) Bill 2010 (Cth); Carbon Pollution Reduction Scheme (Household Assistance) Bill 2010 (Cth); Customs Tariff Amendment (Carbon Pollution Reduction Scheme) Bill 2010 (Cth); Excise Tariff Amendment (Carbon Pollution Reduction Scheme) Bill 2010 (Cth) (collectively, the 2010 Bills package).

[38] The CPRS has had a complex legislative history. Following a lengthy consultation process the Carbon Pollution Reduction Scheme Bill 2009 (Cth) (and associated Bills package (2009 Bills package)) was introduced into the House of Representatives on 14 May 2009. After being referred to the Senate Economics Legislation Committee, the 2009 Bills package passed the House of Representatives on 4 June 2009. The 2009 Bills package was introduced into the Senate on 15 June 2009, but failed in a vote in the Senate on 13 August 2009. The Carbon Pollution Reduction Scheme Bill 2009 (No 2) (Cth) (and associated Bills package (2009 (No 2) Bills package)) was re-introduced into the House of Representatives on 22 October 2009 and passed the House of Representatives on 16 November 2009. The 2009 (No 2) Bills package was re-introduced into the Senate on 17 November 2009. It was amended to reflect certain changes agreed with the Opposition Liberal Party, but after a change in leadership of the Opposition, the 2009 (No 2) Bills package again failed in a vote in the Senate on 2 December 2009.

[39] The CPRS Bill and the 2010 Bills package were introduced into the House of Representatives on 2 February 2010 and passed on 11 February 2010. The 2010 Bills package was introduced into the Senate on 22 February 2010 and its second reading adjourned on 24 February 2010. In a Doorstop Interview on 27 April 2010 and before the re-introduction of the CPRS Bill and the 2010 Bills package into the Senate scheduled for 11 May 2010, the then Prime Minister the Hon Kevin Rudd MP announced the deferral of the CPRS 'until after the conclusion of the current Kyoto commitment period, which finishes at the end of 2012.' Doorstop Interview of the former Prime Minister the Hon Kevin Rudd MP, Nepean Hospital, Penrith (27 April 2010). Prime Minister the Hon Julia Gillard MP initially reaffirmed that timetable saying 'I will use the CPRS as the basis for … consultation on the way forward in reducing pollution through a market mechanism.' Prime Minister the Hon Julia Gillard MP, 'Moving Forward together on Climate Change' (Speech delivered at The University of Queensland, 23 July 2010). The 2010 Bills package lapsed immediately before the commencement of the 43rd Parliament on 27 September 2010. The timetable proposed by the MPCCC returns an Australian ETS to a 1 July 2012 start date, with legislation expected for the Spring session of the 2011 Parliament: Minister for Climate Change and Energy Efficiency, the Hon Greg Combet AM MP, 'Moving to a clean energy future – the next steps', (Press Release, GC55/11, 23 March 2011). This thesis assumes the Constitutional validity of a CPRS Act.

[40] Prime Minister the Hon Julia Gillard MP has stressed that: 'The government's failed carbon pollution reduction scheme had already achieved some good work … it's not my intention to just put that work to one side.' AAP Reuters, 'Carbon price to start July 2012: Gillard', *The Age* (Melbourne), 24 February 2011.

4.1. Key design features of the CPRS

The CPRS would operate only for a defined subset of Australia's GHG emissions.

The GHG emissions coverage under the CPRS Bill would be ring-fenced. The initial estimate is that the CPRS Bill would apply to approximately 1 000 emitters, responsible for approximately 75 per cent of Australia's total GHG emissions.[41]

Late in 2008,[42] and again in 2010,[43] the Australian Government set the cap (target ceiling) for Australia's national emissions. The Government's aim is to reduce GHG emissions by at least five per cent below 2000 levels by 2020[44] and 60 per cent below 2000 levels by 2050.[45]

After the fixed carbon price period ends, the Minister responsible for the *Department of Climate Change and Energy Efficiency* (*DCCEE*) would set a separate CPRS cap (the *national scheme cap number*) for future years, as well as an emissions pathway and gateways to 2025.

Commodification of the right to emit GHG was a core design feature of the CPRS Bill.

Under the CPRS Bill, the regulator – the *Australian Climate Change Regulatory Authority* (*ACCRA*) – would be empowered on behalf of the Australian Government to create statutory rights to emit GHG into the Australian atmosphere (emissions units).

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[41] DCC, White Paper, above n 32, xxviii; Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'Cap and Trade in Australia: lessons on the path to a low carbon economy' (Speech delivered at the Pew Center, Washington, DC, 30 March 2009).

[42] DCC, Green Paper, above n 31, 4-1.

[43] Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, Letter to Executive Secretary, UNFCCC re the Copenhagen Accord (27 January 2010).

[44] The five per cent reduction is an unconditional commitment, reflected in the *Copenhagen Accord*, Decision 2/CP.15, UN document FCCC/CP/2009/11/Add.1. The amount of the reduction may increase up to 25 per cent below 2000 national emissions if other nations also commit to emissions reductions (Former Prime Minister the Hon Kevin Rudd MP, Deputy Prime Minister and Treasurer the Hon Wayne Swan MP and Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'A new target for reducing Australia's carbon pollution' (Press Release, 4 May 2009). The 2020 target at five per cent below 2000 levels is approximately 525 Mt CO_2-e per annum.

[45] Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'Climate Change: A Responsibility Agenda', (Speech delivered at the Australian Industry Group Luncheon, Melbourne, 6 February 2008). A 60 per cent reduction would reduce Australian GHG emissions to approximately 220 Mt CO_2-e per annum. In 2010, Australia's per capita GHG emissions were assessed at 25.75 tons CO_2-e per year, higher than the United States and top of a list of 185 countries: UNEP Urban Environment Unit, *Representative GHG Baselines for Cities and their Respective Countries* (2010) United Nations Environment Program <http://www.unep.org/urban_environment>. See also Department of Climate Change and Energy Efficiency Australian Government, 'Australia's emissions projections 2010' (Report, Australian Government, Department of Climate Change and Energy Efficiency, 9 February 2011). Achieving the national GHG target reductions will mean making per-capita reductions, on average, of 27-34 per cent below 2000 levels: DCC, White Paper, above n 32, xxi.

The emissions units would be called *Australian emission units (AEUs)*.[46]

From the CPRS cap and trajectory set by the Australian Government, ACCRA would define the quantity, terms and timing of AEUs to be released each year in Australia.[47]

4.2. Key elements of liability under the CPRS

Only *liable entities*[48] under the CPRS Bill would be exposed to CPRS obligations: if a non-liable entity, none of the CPRS Bill obligations would attach.

The CPRS Bill[49] would establish obligations for liable entities to monitor, report and acquit GHG emissions from their controlled facilities. Such liable entities would be required to:

- monitor their GHG emissions from facilities for each reporting period (ending 30 June: each called an *eligible financial year*);
- after the reporting period each year and by 31 October in the next eligible financial year, submit a report of those GHG emissions to ACCRA;[50] and
- in order to avoid a *unit shortfall*, no later than by 15 December thereafter,[51] acquire (from any permitted source) and then surrender to ACCRA, the number of *eligible emissions units* (*EEUs*) equal to their *emissions number*.

An AEU would be an eligible emissions unit.[52]

Part 3 of the CPRS Bill would target the following entities (*Part 3 liable entities*) for liability:

- Division 2 – direct emitters of GHG:
    - non-landfill facilities:
        - controlling corporation of a group;
        - non-group entity, and
        - holder of a liability transfer certificate; and

[46] CPRS Bill s 83.
[47] Defined as the National Scheme Cap and the National Scheme Cap number: CPRS Bill s 14. The release will be via auction, or free allocation, or for a fixed price: CPRS Act s 88.
[48] CPRS Bill s 5, in the definitions, provides: '*liable entity* means a person who, under a provision of this Act is a liable entity.'
[49] In conjunction with the *National Greenhouse and Energy Reporting Act 2007* (Cth) (*NGER Act*).
[50] NGER Act s 22A.
[51] CPRS Bill s 132.
[52] Ibid s 5.

    - landfill facilities;
- Division 3 – importers, manufacturers and suppliers of synthetic GHG;
- Division 4 – importers, manufacturers and suppliers of eligible upstream fuels; and
- Division 5 – entities who quote an obligation transfer number.

Direct emissions within the regulatory capture would be reported scope 1 emissions[53] by Part 3 liable entities, plus make-good from earlier periods, less any excess surrender.[54]

A de minimis rule would operate (subject to an anti-avoidance rule) so that Part 3 targets liable entities that emit more than 25 000t CO_2-e[55] each year.

The CPRS would target liable entities in the stationary energy, transport,[56] industrial processes, waste and fugitive emissions sectors.[57]

4.3. Key elements of ownership of emissions units under the CPRS

Ownership of AEUs would be unfettered under the proposed CPRS Bill.

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[53] GHG emissions are classified by the World Business Council for Sustainable Development and World Resources Institute, 'The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard' (2004) into:

Scope 1: Direct GHG emissions

Direct emissions from sources that are owned or controlled by the entity, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment. Excludes direct CO_2 emissions from the combustion of biomass, and emissions not covered by the Kyoto Protocol.

Scope 2: Electricity indirect GHG emissions

Scope 2 accounts for emissions from the generation of purchased electricity consumed by the entity. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the entity. Scope 2 emissions physically occur at the facility where electricity is generated.

Scope 3: Other indirect GHG emissions

Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions arise as a consequence of the activities of the entity, but occur from sources not owned or controlled by the entity. Some examples of scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services.

Under the NGER Act liable entities report scope 1 and scope 2 emissions.

[54] CPRS Bill ss 125 (emissions number), 142 (make-good number), 143 (excess surrender number), and 133 (penalty for unit shortfall).

[55] *National Greenhouse and Energy Reporting Regulations 2008* (Cth) (*NGER Reporting Regulations*), r 2.02 (discussed at s 1.4 of chapter one).

[56] Division 4 would capture downstream scope 3 emissions by affixing liability upstream on the importer, manufacturer and supplier of eligible upstream fuels.

[57] CPRS Bill s 7, as defined in NGER Act s 9 (regulations would further define these sectors).

An AEU would have an indefinite life, until surrendered.[58] When surrendered, one AEU would represent the emission of 1t CO_2-e scope 1 emissions in Australia for the surrendering entity in the relevant period to which the surrender relates. An AEU may be surrendered to ACCRA only once.

The AEU would be personal property[59] and would be a bearer instrument.[60] The AEU may be transferred without restriction.[61]The AEU may be banked into future periods and, subject to conditions, borrowed.[62] However, only AEUs held on Australia's National Registry may be surrendered.[63]

An AEU may be owned without the owner contemporaneously being subjected to any obligations to monitor or report emissions or face any liability imposed under the CPRS Bill. Ownership also may be bifurcated. The creation of equitable interests and security interests in AEUs would be permitted;[64] however legal title would only be transferred by entry into an account in the Registry.[65]

Where any of these disconnections occur (and throughout this thesis) the beneficial owner is termed a *non-liable entity*.

AEUs would be available for all – liable and non-liable entities – to acquire via auctions of original issues by ACCRA[66] – this is the primary market.

From ETS commencement and during a transitional period, AEUs would be acquired by liable entities for a fixed price (called a *safety valve*)[67] upon application to ACCRA.

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[58] There would be no power in the regulator to extinguish AEUs without compensation, save for AEUs acquired through fraud on the Commonwealth: CPRS Bill pt 15.
[59] CPRS Bill s 94.
[60] The AEU would be a financial product, s 764A(1)(l), *Corporations Act 2001* (Cth)(*Corporations Act*). The AEU would be impressed with a unique identification number: CPRS Bill s 84, marked by the year of first-use (vintage): CPRS Bill s 85(2).
[61] CPRS Bill ss 94–98 (there would be restrictions upon whom the CPRS Bill recognises as transferees, discussed further in s 2.1 of chapter one).
[62] CPRS Bill s 133.
[63] Ibid s 129: the AEU would be uncertified, represented instead by an electronic entry in the Australian National Registry: CPRS Bill s 145(3).
[64] Ibid s 98A.
[65] Ibid ss 95, 98.
[66] Ibid s 99. AEUs would be issued free under industry assistance programs (pt 8 and pt 8A) and also for voluntary opt-in to the CPRS (pt 10, pt 11 and pt 11A). The AEUs issued free to certain entities may be sold by recipients in the primary market auction process: CPRS Bill ss 100-102.
[67] Ibid s 89. The carbon price framework proposes a fixed price period of three to five years. Other conditions would apply to safety valve AEUs, including limitations on numbers that may be acquired and trading restrictions (discussed further in ss 1.2, 1.6 and 1.12 of chapter one).

Because AEUs (other than safety valve AEUs) would be bearer instruments, and may be transferred, they may also be acquired by anyone. An emissions trading market in Australia[68] would emerge to exchange AEUs (i.e. buying and selling after the initial entry of AEUs into commerce in the primary market) – this is the secondary market (which includes transactions through regulated exchanges and by private treaty or *over-the-counter* (*OTC*) exchange).

The CPRS would permit markets in futures, derivatives and other structured or synthetic products – this is the forward or derivatives market.[69]

The markets for AEUs would be open to all.

5. Structure of this thesis

This thesis presents its arguments for conditioning ownership of AEUs in three parts.

Part I – Commodification of GHG emissions

Chapter one explains how the CPRS Bill would create unfettered ownership rights in the right to emit GHG. The chapter analyses the features of:

- the CPRS Bill that support commodification of the AEU; and
- the CPRS Bill, the *Corporations Act 2001* (Cth) (*Corporations Act*), *Corporations Regulations 2001* (*Corporations Regulations*), and draft proposed regulations, that operate to restrict free transfer of AEUs.

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[68] By design, the CPRS accommodates international linkage. *Eligible international emissions units* could be available for import after the fixed price period.

[69] The Interagency Working Group for the Study on Oversight of Carbon Markets described a derivative, or a derivative contract as:

> a financial instrument whose value is based on, or derived from, the value of an underlying asset (e.g., a stock), commodity (e.g., wheat and oil) or measurable event (e.g., weather or a bankruptcy). In carbon markets, derivative contracts could be based on the price of carbon emission allowances or offset credits.

Interagency Working Group for the Study on Oversight of Carbon Markets, 'Report on the Oversight of Existing and Prospective Carbon Markets' (Report, US Commodity Futures Trading Commission, 18 January 2011) 15. The forwards or derivatives market therefore should be primarily risk management and price discovery markets where the price is tied to the price of the underlying AEU. Actual transfer of an AEU cannot occur in this market, because of ss 95 and 98 of the CPRS Bill. As described by Collins and Palmer (2008):

> The forward market involves agreements to buy or sell, or the option to buy or sell, or swap an asset (which can be of any kind) at a set price on an agreed future date. Forward trading can occur on an exchange through standardised futures contracts or on the OTC market by transactions negotiated through brokers or directly between counterparties.

Collins and Palmer, above n 11, 45. Consistently with the Corporations Act the term 'derivatives market' is used in this thesis to describe this market.

Section 1.7 of chapter one focuses upon the potential for speculation in AEUs. This thesis adopts the following definition of speculation proffered by Hirshleifer (1977):

> Speculation is ordinarily understood to mean the purchase of a good for later re-sale rather than for use, or the temporary sale of a good with the intention of later re-purchase – in the hope of profiting from an intervening price change.[70]

The analysis of chapter one reveals that neither the CPRS Bill, nor recent amendments to the Corporations Act or Corporations Regulations (including draft regulations) would subject AEUs to a synchronisation rule or an enhanced carbon market integrity regime as proposed by this thesis.

Chapter two informs the comparative analysis by examining the emissions trading schemes operational in the EU and New Zealand. The chapter demonstrates commodification of the *European Emissions Allowance* (*EUA*) in the EU ETS, and of the *New Zealand Emissions Unit* (*NZU*) in the NZ ETS. It is noted that EUAs will be distributed predominantly by auction from 1 January 2013. *Commission Regulation (EU) No 1031/2010*[71] (the EU ETS auction regulation) published by the Commission of the European Union (*European Commission*) in late 2010 signals a shift to close the EU ETS to operators and authorised investment firms. The European Commission is currently studying market oversight required in the EU ETS. As part of this study, the European Commission proposed further draft regulations for the Union Registry (*draft EU Registry regulations*) on 5 May 2011 signalling a further shift to limit EUAs.

Chapter three completes the comparative analysis and illustrates commodification of the *US Emissions Allowance* (*UEA*), the currency of the US ETS planned to be introduced by the merger of the ACES Act and the APA (*ACES Act/APA*). The ACES Act/APA proposed to close the US ETS to liable entities and regulated greenhouse gas market participants (*regulated GHG participants*). The APA also proposed to introduce a market integrity regime through amendments to the *Commodity Exchange Act* (US).[72] The provisions of the ACES Act/APA are a potential model for an Australian ETS.

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[70] J Hirshleifer, 'The Theory of Speculation Under Alternative Regimes of Markets' (1977) 32 *The Journal of Finance* 975, 975.

[71] *Commission Regulation (EU) No 1031/2010* of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and the Council establishing a scheme for greenhouse gas emission allowance trading within the Community [2010] OJ L 302,1.

[72] 7 USC 1a.

Chapters one, two and three compare and analyse the design strengths and weaknesses of these emissions trading schemes. The focus is narrowed to:

- the commodification of the right to emit GHG created by the relevant scheme; and
- proposals for enhanced carbon market integrity regimes in the EU and US emissions trading schemes.

Chapter four examines the aberrant experiences of operational emissions trading schemes driven by commodification of GHG emissions, and lessons that may be learned. The chapter details six lessons:

1. gaming and arbitrage is inherent in a fragmented global carbon market with nuances in design rules of emissions trading schemes;
2. theft and fraud (and similar abusive practices) are facilitated by the unfettered ownership of emissions units;
3. the CPRS in its proposed design would not capture excessive speculation by non-liable entities;
4. financial intermediaries would find opportunities to profit by trading compliance units between the Australian ETS and international markets;
5. gaming behaviour would be incentivised by unfettered ownership; and
6. monetising carbon sequestration would not necessarily reduce emissions.

Part II – Theoretical framework for carbon market supervision

Part II sets the theoretical foundation for the synchronisation rule and enhanced carbon market integrity regime in an ETS.

Chapter five proposes new legislation for a synchronisation rule and enhanced market supervision regime to constrain the ownership of an AEU in the CPRS Bill, and thus affect behaviour of non-liable entities. The provisions fit into the CPRS Bill (as a proxy for the design of the carbon pricing mechanism) but could fit any ETS under the carbon price framework.

A synchronisation rule in the CPRS Bill would tie obligations under the CPRS Bill with ownership of an AEU.

The conditioning of ownership would be achieved by:

- strengthening the requirements for opening a Registry account; and
- deeming certain non-liable entities to be liable entities within Part 3 of the CPRS Bill. A new Part 3A would be inserted into the CPRS Bill.

Registry account opening requirements in s 147 of the CPRS Bill would be augmented by new ss (ca) and (cb) and new s (8a) (modelled in part on similar account opening requirements proposed for the EU ETS), inserted in s 147(2) of the CPRS Bill.

In order to open a Registry account an applicant who applies to open a Registry account would be required (in addition to meeting the tests proposed in s 147 which include proof of identity) to:

- apply for a greenhouse gas emissions permit issued by ACCRA; and
- in a statutory declaration to ACCRA:
    - affirm that the opening of the Registry account is for the purposes of the CPRS Bill;
    - disclose whether it is intended that the applicant shall be holding eligible emissions units in the Registry account for surrender, cancellation or for sale;
    - disclose any prior criminal conviction or civil penalties, and if the applicant is an non-individual entity, any criminal conviction or civil penalties against its directors;
    - agree that acquisition of Australian emissions units may result in a liability under the CPRS Bill (and consequently, the requirement to surrender AEUs); and
    - acknowledge that failure to adhere to Registry account rules or meet any liabilities under the CPRS Bill may attract civil and administrative penalties and suspension or forfeiture of the Registry account.

An enhanced carbon market integrity regime would supplement the existing regulatory framework and provide extensive market intervention, investigation and information gathering powers to ACCRA. A new Part 19A of the CPRS Bill would embrace market oversight rules modelled upon similar provisions in the ACES Act/APA.

Chapter six studies the rules for synchronisation and market integrity in an ETS from the perspective of regulatory theory. The chapter builds upon theories of regulation to achieve fair and orderly markets, in order to support the use of a synchronisation rule and enhanced carbon market integrity regime in the public interest.

Part III – Applying rules for synchronisation and market integrity

In chapter seven, practice and theory are updated to account for the GFC and the new market supervisory regime emerging in its wake.

The chapter undertakes a comparative review of the commonalities and differences in regulatory oversights for the carbon markets in Australia, Europe and the United States. The review includes proposed amendments to the Corporations Act as well as market integrity rules introduced 1 August 2010 by the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth).

This thesis argues that emerging market oversight rules introduce a new paradigm for emissions trading schemes that should be reflected in the design of Australia's ETS.

The analysis of chapter seven supports the answer of the critical question about the role that unfettered ownership of emissions units in primary, secondary and derivatives markets should play in a fair and orderly carbon market.

6. FAIR AND ORDERLY CARBON MARKETS

The concept of a fair and orderly market is used in the Corporations Act and in regulations and rules. However, the terms are not defined.

Perram J considered (for the first time in Australia) the meaning of the expression 'fair, orderly and transparent market' in the case of *Transmarket Trading Pty Ltd v Sydney Futures Exchange Ltd* (2010) 188 FCR 1.[73] Perram J concluded that the expression is a 'composite phrase to be interpreted as a whole and not in parts.'[74]

Further, he concluded that the phrase suggests a link 'between the notion of fair and orderly markets and the conduct of a more efficient and an effective market.'[75] He continued:

> It is, I think, impossible to give an exhaustive statement of what is comprehended in the notion of a fair, orderly and transparent market. It suffices for present purposes, however, to observe that it appears to

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[73] Also reported at [2010] FCA 534 and (2010) 78 ACSR 507.
[74] *Transmarket Trading Pty Ltd v Sydney Futures Exchange Ltd* (2010) 188 FCR 1, 25.
[75] Ibid.

> have at least two concepts at its core. One relates to a state of affairs in which all market participants are placed in an equal position such that there is level playing field. The second, which is encompassed by the word 'orderly', is the notion of reliable market operations displaying price continuity and depth and in which unreasonable price variations between sales are avoided.[76]

Monast, Anda and Profeta (2009) of Duke University suggest that carbon market design should not occur in a vacuum nor ignore 'useful lessons about market design and oversight.'[77] Accordingly, this thesis eschews defining the phrase 'fair and orderly market' when applied to carbon markets to mean exclusively a carbon market that achieves the environmental objective. In this thesis, the objectives of the Australian Government for the Australian ETS would also inform its meaning.

This thesis additionally asserts that Australian carbon markets would be fair and orderly[78] if they:

- are an equal playing field for all market participants; and
- arrest abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units for purposes for which the Australian ETS was not created.

7. MODELS FOR OWNERSHIP OF EMISSIONS UNITS

The comparative analysis of this thesis underpins its recommendations for the design of ownership rights in the AEU in order to achieve a fair and orderly carbon market.

Carbon market oversight reforms currently proposed and under consideration for the EU ETS, and as proposed in 2010 for the US ETS, have influenced the design of the

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[76] Ibid 26. The US Securities and Exchange Commission suggests:

> A 'fair' market is free from manipulative and deceptive practices, and affords no undue advantage to any participant. An 'orderly' market is characterised by regular, reliable operations, with price continuity and depth, in which price movements are companied by appropriate volume, and unreasonable price variations between sales are avoided.

US Securities and Exchange Commission, 'Order Instituting Administrative and Cease-And-Desist Proceedings' (Exchange Act Release No 34–49500, 82 SEC Docket 1903 (promulgated March 30 2004)) para 4. In the case of *Re: Labranche Securities Litigation* (2005) 405 F Supp 2d 333, Sweet DJ considered that interpositioning, trading ahead and improperly effecting proprietary trades, for example were activities by a broker that were manipulative and deceptive.

[77] Jonas Monast, Jon Anda and Tim Profeta, 'US Carbon Market Design: Regulating Emission Allowances as Financial Instruments' (Working Paper CCPP 09-01, Nicholas Institute for Environmental Policy Solutions, Climate Change Policy Partnership, Duke University, February 2009) 3.

[78] The thesis construction of fair and orderly respects the caveat by Perram J in the Transmarket case (at 26) that 'I do not think that the pursuit of orderly markets carries with it the eradication of volatile or unpredictable markets.'

synchronisation rule and enhanced carbon market integrity regime recommended by this thesis. These proposals include:

- limiting participation in the relevant carbon market to liable entities and regulated participants/authorised investment firms; and
- adopting stringent carbon market oversight rules.

In lieu of limiting participation, this thesis proposes synchronising ownership of AEUs with liability under the Australian ETS.

7.1. Regulating participation in the Australian carbon market

Limiting participation in the Australian carbon market to liable entities and a set of regulated participants would be a pre-emptive rule.

Like the proposed CPRS Bill, participation in the EU ETS and the NZ ETS is currently open to liable and non-liable entities. However, in the EU ETS there is a shift occurring towards limiting participation in the EU ETS to operators and authorised investment firms. This shift started in the EU ETS auction regulations and has continued with draft EU Registry regulations released 5 May 2011.

The US ETS was proposed to be only open to liable entities and regulated GHG participants. The Californian cap-and-trade ETS (to start 1 January 2012) will also limit participation.[79]

7.2. Synchronising ownership of AEUs and liability

A synchronisation rule would also be a pre-emptive rule. It is a rule fashioned to affect and modify behaviour before it occurs.

The synchronisation rule differs from the EU and US proposals because the closure proposed in the EU ETS and the US ETS would not attach ETS obligations to non-liable entities (although regulating their participation in the carbon market).

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[79] *Global Warming Solutions Act of 2006 (Cal Health and Safety Code)* (*AB 32*). Sub-art 5 (registration and accounts) in sub-ch 10 (Climate Change, art 5, ss 95800-96022) of Title 17, *California Code of Regulations* provides that an account may not be opened unless the applicant provides (inter alia) a 'statement of basis for qualifying for registration' (pursuant to ss 95811, 95813, or 95814 of the regulations). The Californian ETS is not analysed in this thesis because it is not a national or supra-national ETS, in the manner of the EU ETS, the NZ ETS, or the CPRS.

The key to the synchronisation rule is that it would tie obligations under the Australian ETS with ownership of an AEU. Because the conditioning would be achieved by strengthening the requirements for opening a Registry account to include obtaining a GHG permit from ACCRA and by new rules deeming the non-liable entity to be a Part 3 liable entity, the rule would be more likely to arrest gaming as well as theft, fraud, manipulation and excessive speculation in emissions units for purposes for which the Australian ETS was not created.

7.3. Enhanced carbon market integrity

An enhanced carbon market integrity regime would embody retro-active market oversight rules. These rules would be appropriately modified rules similar to the market integrity rules introduced 1 August 2010 under the Corporations Act – operative once an observed behaviour had occurred. Such oversight measures would help safe-guard against gaming as well as theft, fraud, manipulation and excessive speculation.

The APA presents some model provisions, as do the Australian market integrity rules. However, the Australian market integrity rules would require specific amendment to fit a carbon market. Accordingly, the enhanced carbon market integrity regime recommended by this thesis would supplement the existing regulatory framework and provide extensive market intervention, investigation and information gathering powers to ACCRA.

8. CONCLUSIONS

If the design rules proposed by this thesis are adopted, then by design, liable entities and non-liable entities would be placed in an equal position. A fair and orderly carbon market means a level playing field and no undue advantage to any participant, including identical exposure to liability. Gaming of ETS design, and theft, fraud, manipulation and excessive speculation in emissions units for purposes for which the Australian ETS was not created would be arrested.

Supported by public interest regulatory theory and the experiences of operational emissions trading schemes and financial markets before and during the GFC, this thesis demonstrates that unfettered ownership rights would be a limited or unreliable basis for an Australian carbon market post-GFC.

More fundamentally, the design parameters for an Australian ETS require updating to account for aberrant experiences with contemporary emissions trading schemes and international regulations for market supervision introduced after the GFC. This thesis argues that it is critical that future legislation for a carbon price framework in Australia be mindful of the progress in market oversight made in operational emissions trading schemes – progress that was spurred on by the lessons learned as a result of the GFC.

The Australian Government announced[80] its intention to introduce draft legislation for the carbon pricing mechanism in the Spring Sitting of Parliament (August-November 2011). It is likely that the legislation will be based on the CPRS Bill examined in this thesis.[81] This highlights the timely nature of the analysis in this thesis, and strengthens the need for critical appraisal of the market integrity rules of the Australian carbon market.

The synchronisation rule and enhanced carbon market integrity regime recommended by this thesis reflect best practice market design and supervision. They are justifiable regulatory controls, reflecting carbon market oversight rules recently proposed in the EU and the US to promote fair and orderly carbon markets.

The proposed amendments represent a shift in design philosophy. They recognise a connection between the manner in which rights to emit GHGs are traded and the attainment of the environmental objective of reducing emissions.

Harsh experience has taught the EU and the US that rules permitting unfettered ownership also permit abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units independent of the achievement of environmental objectives. Emerging rules recognise that a fair and orderly carbon market is in the public interest. In the international carbon markets, the post-GFC response is being harmonised. Accordingly, by fettering ownership rights in emission units to protect liable entities, Australian Government revenue and consumers, the thesis proposals would reflect best practice ETS design.

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[80] Minister for Climate Change and Energy Efficiency, the Hon Greg Combet AM MP, 'Moving to a clean energy future – the next steps', (Press Release, GC55/11, 23 March 2011).
[81] Recall the comments of the Prime Minister the Hon Julia Gillard MP, above n 39 and n 40.

CHAPTER 1

THE AEU AS A COMMODITY UNDER THE CPRS

The Australian carbon market would be shaped according to the coverage of the CPRS Bill and the attributes of ownership inherent in AEUs. In turn, the coverage and attributes define the permitted behaviour of liable entities and non-liable entities.

Although the Carbon Pollution Reduction Scheme Bill 2010 (Cth) (CPRS Bill) lapsed immediately before the commencement of the 43rd Parliament of Australia on 27 September 2010, it remains the best guide to the design of an Australian ETS. The draft CPRS legislation is likely to provide the foundation upon which 2011 legislation for a carbon pricing mechanism is based. The CPRS Bill accommodates both the fixed price start in the carbon price framework proposed by the MPCCC '(through the issuance of fixed price units within an emissions trading scheme)'[1] and the legislative machinery for Australia's ETS upon conversion 'to a cap-and-trade emissions trading scheme.'[2]

This chapter analyses:

- the design features of the CPRS Bill that create rights in AEUs, and hence are indicative of commodification; and
- the design features of the CPRS Bill and the Corporations Act and Corporations Regulations (including draft proposed regulations) that operate (or are intended to operate) in a manner that may restrict free transfer of AEUs.

Neither the CPRS Bill nor the Corporations Act contains a synchronisation rule. The Corporations Act and Corporations Regulations and rules contain limited market integrity provisions, but neither the CPRS Bill nor the Corporations Act or Corporations Regulations (including draft proposed regulations) contain an enhanced carbon market integrity regime as proposed by this thesis.

1. CPRS DESIGN SUPPORTING COMMODIFICATION

The CPRS Bill is the legislative embodiment of the policy of the Australian Government set out in the *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper* (*White Paper*) released by DCC on 15 December 2008.

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[1] Multi-Party Climate Change Committee, 'Carbon Price Mechanism' (Communiqué of the Multi-Party Climate Change Committee, 24 February 2011).
[2] Ibid.

The question of coverage of the CPRS Bill is a critical issue because it defines non-liable entities. Professor Ross Garnaut was well aware of this issue and concluded in the Garnaut Review that all sectors of the Australian economy should be covered by the CPRS, unless the costs of inclusion would be prohibitive, for example, due to scale, or due to uncertainties associated with measurement, monitoring and verification methodologies.[3] Absence of mandatory coverage means that those outside scheme coverage would not be encouraged to change their GHG emissions behaviour by the legislation or the related market.[4]

How does the CPRS Bill activate the commodification of the right to emit GHG? In answer, the chapter turns first to address the specific provisions of the CPRS Bill which support the conclusion that the AEU is a commodity capable of being traded without regard for, and abstracted from, any environmental objective.

1.1. Open-dated scheme

The proposed CPRS would have no end date.

An AEU also has no end date. An AEU once issued has an indefinite life, remaining valid until surrendered,[5] cancelled or relinquished.[6]

An AEU would be a fungible bearer instrument.

The nature of an AEU would not change by transfer. Any person who is the owner of the AEU would possess the right inherent in the AEU (crystallised upon surrender) to be covered by the AEU for 1t CO_2-e emissions in the period in respect of which the AEU is surrendered. For example, an AEU issued in 2013 would be as good for 1t CO_2-e emissions if surrendered in the 2013 eligible financial year as it would be good for 1t CO_2-e emissions if surrendered in the 2053 eligible financial year.

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[3] Ross Garnaut, 'Final Report to the Commonwealth, State and Territory Governments of Australia' (Garnaut Climate Change Review, 30 September 2008). The Carbon Pollution Reduction Scheme Bill 2010 (Cth) (CPRS Bill) was intended to apply only to the following sectors: stationery energy, transport, industrial processes, fugitive emissions and waste. Importantly, the agricultural sector, the commercial building sector, and aviation (all sectors responsible for significant emissions) and individuals and households, were not to be included in the CPRS Bill liability net.

[4] This thesis assumes that an emissions trading scheme with universal coverage (no non-liable entities) and no thresholds or exclusions is a presently unattainable goal: cf House of Commons Environmental Audit Committee, 'Personal Carbon Trading' (Fifth Report of Session 2007-08, United Kingdom Parliament, 2008).

[5] Only AEUs held on the National Registry may be surrendered.

[6] CPRS Bill pt 4, 6.

There would be no power in the regulator to extinguish AEUs without compensation.[7]

These intertemporal features within the CPRS Bill are indicators of commodification because they enable and support a disconnection between emission of GHG, the ownership and use of the rights created to permit emissions of GHG (for example, AEUs) and the reduction of emissions.

No liable entity within the CPRS (and critically, *no* non-liable entity outside the CPRS) faces any quantitative restriction on emissions of GHG. Indeed,

> companies are free to emit at whatever level they choose, as long as they surrender an eligible compliance permit for every tonne of those emissions at the end of the compliance period.[8]

In order to avoid a unit shortfall a liable entity must (no later than by 15 December in the financial year after the eligible financial year) surrender to ACCRA the number of eligible emissions units (acquired from any permitted source) equal to their emissions number.

The resultant make-good number and unit shortfall penalty that arise if a unit shortfall occurs would give rise to financial consequences only. Those financial consequences should not be markedly different from the expected price range for AEUs, notwithstanding that neither the short fall penalty nor the late payment penalty would be deductible for income tax purposes.[9] For example, any unit shortfall penalty is be calculated at a price set at a maximum of 110 per cent of the *benchmark average auction price* (*BAAP*) of AEUs auctioned during the eligible financial year, and any penalty for late payment is be calculated at 20 per cent per annum.

1.2. Modified capped scheme

Although a cap-and-trade ETS, three features of the CPRS would effectively uncap it in practice.

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[7] CPRS Bill s 383.

[8] Department of Climate Change (*DCC*) Australian Government, 'Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper' (Policy Paper, Australian Government, Department of Climate Change, 15 December 2008), 5-9.

[9] *Bill* for the *Carbon Pollution Reduction Scheme (Consequential Amendments) Act 2010* (Cth) (*CPRS Consequential Amendments Bill*), sch 2.

First, in the CPRS Bill, eligible emissions units by design comprise of AEUs and IEUs.[10] Accordingly, IEUs substitute for AEUs.[11] Because IEUs comprise of Kyoto units and non-Kyoto units, the stock of AEUs would be augmented by the uncapped importation of these Kyoto units and non-Kyoto units. In practice, the only quantitative limit in Australia on IEUs would therefore be the physical limit on the pipeline of credits emerging as Kyoto units or non-Kyoto units.[12]

Second, in the CPRS Bill liable entities would be granted access during a transitional period to fixed price AEUs.[13] Section 89 of the CPRS Bill proposed that AEUs would be issued for the fixed prices outlined in Table 1.1 (with a commencement date for the CPRS of 1 July 2011).

Table 1.1: Fixed prices of AEUs

OPEN PERIOD	VINTAGE	COST
1/7/11-15/12/12	2010	A$ 10
1/7/12-15/12/13	2013	A$ 43
1/7/13-15/12/14	2014	A$ 46.23
1/7/14-15/12/15	2015	A$ 49.69
1/7/15-15/12/16	2016	A$ 53.42

The ability for liable entities to acquire fixed price AEUs is termed a *safety valve.*[14] Such a safety valve is also proposed in the carbon price framework. In the CPRS Bill, only liable entities would be entitled to buy fixed price AEUs. The quantity of fixed price AEUs would be equal to the difference between the emissions number and eligible emissions units surrendered.[15] In aggregate however, the access of liable entities to fixed price AEUs is of unlimited quantity.

A safety valve removes the quantitative restriction on emissions to be covered by the

[10] CPRS Bill s 5. The carbon price framework envisages that AEUs and IEUs may substitute, but any substitutability may be deferred until the cap-and-trade ETS commences.
[11] Ibid (discussed further in chapter two).
[12] The extent of substitution under the carbon price framework is not yet determined.
[13] Ibid s 89(1). The carbon price framework announced a fixed price start period from commencement on 1 July 2012, extending through to 2015 or 2017.
[14] See Henry D Jacoby and A Denny Ellerman, 'The safety valve and climate policy' (2004) 32 *Energy Policy* 481.
[15] CPRS Bill s 89(2).

Australian ETS. A safety valve price which is not out-of-market may also act as a carbon price signal – this would be the case particularly if the fixed price is deliberately set low to encourage a soft start to the Australian ETS.[16]

Third, the CPRS Bill in Part 10 (reforestation), Part 11 (destruction of synthetic GHG) and Part 11A (domestic offset program) provides for the creation[17] and free issue of AEUs for the voluntary opt-in to the CPRS. Again, there is no proposed limitation to the number of AEUs that may be so created.

The CPRS cap (the national scheme cap number) would be set five years in advance and gazetted in regulations proclaimed by the Minister responsible for the DCCEE.[18] Notwithstanding that a number of factors input into the determination by the responsible Minister, looking ahead for a period of five years must involve some estimation. Therefore, the CPRS caps outlined for particular eligible financial years could be disconnected from and bear no relation to the GHG emissions in that year, or the preferred target for those emissions.

1.3. Coverage and thresholds

The GHG to be covered by the CPRS Bill are statutorily defined.[19] GHG would have the same meaning as that term is defined in s 7 (pointing to s 7A) of the *National Greenhouse and Energy Reporting Act 2007* (Cth) (*NGER Act*). GHGs are:

- carbon dioxide (CO_2);
- methane (CH_4);
- nitrous oxide (N_2O);
- synthetic greenhouse gas, to be defined in proposed s 7B of the NGER Act as:
    - sulphur hexafluoride (SF_6);
    - per-fluorocarbons (*PFC*) (13 types as per Table 1, s 7B(2));
    - hydro-fluorocarbons (*HCFC*) (7 types as per Table 2, s 7B(3)); and

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[16] The price for the fixed carbon price units in the carbon price framework had not been set at 15 May 2011. The fixed price start in the CPRS was to be A$10 per t CO_2-e of emissions: Former Prime Minister the Hon Kevin Rudd MP, Deputy Prime Minister and Treasurer the Hon Wayne Swan MP and Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'A new target for reducing Australia's carbon pollution' (Press Release, 4 May 2009).
[17] CPRS Bill s 88.
[18] Ibid s 14. If there is no national scheme cap number, then the CPRS cap would reduce by one per cent per annum.
[19] Ibid s 5, in conjunction with the *National Greenhouse and Energy Reporting Regulations 2008* (*NGER Reporting Regulations*).

- a prescribed gas.[20]

Liability under the CPRS Bill is confined to Part 3 liable entities.

Limiting liability under the CPRS Bill to Part 3 liable entities, and providing for satisfaction of their liability through eligible emissions units (AEUs and IEUs) is indicative of the creation of the AEU as a commodity that is intended to be of benefit only to a limited number of economic agents. Large GHG emitters in the stationary energy, transport, fugitive emissions, industrial processes and waste sectors would be liable entities, and thus to the extent that AEUs enshrine or imply a right to emit GHG up to the number of AEUs held, these entities would be targeted for emissions reduction. The liability is reduced if AEUs are issued free, as proposed under certain assistance programs (for example, under the *emissions-intensive trade-exposed* (*EITE*) program under Part 8 of the CPRS Bill).

It is evident that the AEU is intended for large GHG emitters. Indeed, many economic agents in the commercial building sector, financial services and aviation, and individuals and households would be excluded from liability altogether under the CPRS Bill.

CPRS thresholds thus further limit coverage and reinforce commodification. Liability under Part 3 of the CPRS Bill would cover:

- stationary energy – facilities with scope 1 emissions greater than 25 000t CO_2-e (25kt) per annum, and suppliers of fuel to small energy users;
- transport – upstream fuel suppliers (excluding exports and international transport, plastics and defence) with embedded potential (scope 3) emissions greater than 25 000t CO_2-e per annum;
- fugitive emissions (for example, discharges from pipelines and mines) – facilities with scope 1 emissions greater than 25 000t CO_2-e per annum;
- industrial processes – facilities with scope 1 emissions greater than 25 000t CO_2-e per annum, including synthetic GHGs; and
- waste – landfill facilities with scope 1 emissions greater than 25 000t CO_2-e per annum (reduced in certain circumstances to 10 000t CO_2-e per annum) except

[20] There are 24 GHGs in total.

for landfill sites closed before 30 June 2008, legacy emissions (until 2018) and methane from waste landfill (zero rated).

Coverage (and commodification) is to be further extended by including land-based sectors under the Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth) (*CFI Bill*) to introduce a *Carbon Farming Initiative* (*CFI*) announced in November 2010 to generate credits from land management carbon abatement.[21]

Commodification in the CPRS Bill is also evidenced by extension of CPRS coverage under Part 10, 11 and 11A to voluntary opt-in for forestry activities covered by Australia's Kyoto commitments, destruction of synthetic GHG and certain domestic voluntary offset programs.

The definition of GHG requires there to be a release of an emission into the atmosphere. Accordingly, carbon capture and storage (*CCS*) at facilities would not count as GHG emissions at the facility level for determining the threshold. Instead, CCS facilities would be covered for fugitive emissions.

For those liable entities under Part 3 of the CPRS Bill that face upstream liability (for example, fuel suppliers) the AEU would cover their scope 3 emissions of GHG. Thus it is proposed that all fuel excise and customs duty remitters would be covered for all fuel combustion emissions and emissions from synthetic liquid fuels.[22] LPG emissions would be covered by entities that first supply LPG for use in Australia's domestic market. LNG emissions would likewise be covered by entities that first supply LNG for use in Australia. Natural gas combustion emissions would be covered by facilities with direct emissions greater than 25 000t CO_2-e and entities that originate supply of natural gas for use in Australia. Coal and coal by-product emissions would be covered by entities that originate supply of coal and coal-by-products for use in Australia.

An administrative mechanism – to be known as the *Obligation Transfer Number* (*OTN*) – is further evidence of commodification. The OTN regime would be established to

[21] Department of Climate Change and Energy Efficiency Australian Government, 'Design of the Carbon Farming Initiative Consultation Paper' (Report, Australian Government, Department of Climate Change and Energy Efficiency, 2010). A Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth) (*CFI Bill*) was introduced into the House of Representatives on 24 March 2011 and was referred on 25 March 2011 to the Senate Environment and Communications Legislation Committee to report by 20 May 2011. The credits generated are styled Kyoto CFIs and non-Kyoto CFIs. Carbon sequestration under the CFI is discussed in s 4.6 of chapter four.

[22] Biofuels and biomass would not be covered.

enable obligations to be transferred with supplies from upstream to downstream in prescribed circumstances, thereby transferring the CPRS obligation.[23]

Once the liability threshold is exceeded, the obligation for liable entities to cover emissions extends to all emissions from a facility, not just the marginal emissions in excess of the threshold. Like the NGER Act, which attaches the obligation to register and report with a constitutional corporation that controls a facility in Australia (or that is the head entity in Australia of an Australian group of companies that control such facilities), the CPRS Bill would also adopt a grouping concept to attach liability to a head entity. A *liability transfer certificate* (*LTC*) mechanism would allow for a head entity to transfer liability to another group entity.[24]

1.4. Commensuration

Commensuration[25] is a necessary first step to commodification and substitutability.

Commensuration is evidenced in the CPRS Bill by the fact that the GHG emissions covered by an AEU will be any of a bundle of 24 emission types. Broadly, GHGs are grouped into six gases: carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydro fluorocarbons and per fluorocarbons.

The GHGs covered by the AEU are self-evidently a legislative construct. GHGs as defined[26] excludes those gases that deplete the ozone in the upper atmosphere,[27] sulphur dioxide (SO_2) and oxides of nitrogen (NO_x), and all other air pollutants registered on the *National Pollutant Inventory* (*NPI*).[28] GHGs also exclude water vapour.

Save for coverage of synthetic GHG (HCFCs and PFCs that replace CFCs and ODSs)

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[23] CPRS Bill pt 3, div 5.
[24] Ibid pt 3, div 6.
[25] Wendy Nelson Espeland and Mitchell L Stevens, 'Commensuration as a Social Process' (1998) 24 *Annual Reviews* 313.
[26] NGER Act s 7; CPRS Bill s 5; UNFCCC art 5(1).
[27] Gases that deplete the ozone in the upper atmosphere include the radical catalysts: nitric oxide (*NO*), nitrous oxide (N_2O), hydroxyl (*OH*), atomic chlorine (*Cl*), and atomic bromine (*Br*), (collectively, ozone depleting substances (*ODSs*)) and elements of many man-made organohalogen compounds, especially chlorofluorocarbons (*CFCs*) and bromofluorocarbons (*BFCs*). See Mario J Molina and F Sherwood Rowland, 'Stratosheric sink for chlorofluoromethanes: chlorine atomc-atalysed destruction of ozone' (1974) 249 *Nature* 810; F Sherwood Rowland and Mario J Molina, 'The CFC-Ozone Puzzle: Environmental science in the global arena' (Paper presented at the The John H. Chafee Memorial Lecture on Science and the Environment, at the First National Conference on Science, Policy and the Environment, Washington (DC), 7 December 2000).
[28] See also *National Environment Protection (Ambient Air Quality) Measure* (Cth).

the AEU coverage excludes CFCs and ODSs, SO_2 and NO_x, and all other air pollutants registered on the NPI; an AEU also does not cover water vapour.

Each of the greenhouse gases is made *equal* through a formula to determine their *global warming potential* (*GWP*). GWP is also a construct, based on a scientific estimate of the atmospheric life of GHGs measured over a period of 100 years and their relative capacity to absorb solar radiation. GWPs in Australia are as set out in Table 1.2.

Table 1.2: Global warming potential of greenhouse gases

GREENHOUSE GAS	GLOBAL WARMING POTENTIAL
Carbon dioxide	1
Methane	21
Nitrous oxide	310
Sulphur hexafluoride	23,900
Hydro fluorocarbons	140 to 11,700
Per fluorocarbons	6,500 to 9,200

In Australia, CO_2-equivalence via GWP is mandated by s 7 of the NGER Act and is specified in Regulation 2.02 of the *National Greenhouse and Energy Reporting Regulations 2008* (Cth) (*NGER Reporting Regulations*). Internationally, the GWP are those accepted by the *Intergovernmental Panel on Climate Change* (*IPCC*) and the *Conference of the Parties* (*COP*) to the UNFCCC.[29]

The use of GWP assumes substitutability among GHGs. Australian formulas in the NGER Reporting Regulations embed the climate change science and present GWP relationships in 24 different numbers, one corresponding to each identified GHG.[30] Application of the NGER Reporting Regulations by liable entities would be mandatory.[31] However, absolute certainty is absent,[32] and there is disagreement between institutions. For example, in relation to methane, the NGER Reporting Regulations specify a GWP of 21, the IPCC now specify 23 and the ACES Act specifies 25.

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[29] Kyoto Protocol art 5(3). The multiplier in-build within GWP is analysed further in s 4.5 of chapter four.

[30] NGER Reporting Regulations r 2.02, column 4.

[31] NGER Act ss 10(3), 12 and 19; CPRS Bill s 25. The tabular presentation in those regulations implies a confidence that our biophysical knowledge of carbon flows between the atmosphere and the biosphere is sufficiently certain so as to permit the measurement and reporting of emissions of GHG.

[32] Intergovernmental Panel on Climate Change, 'Summary for Policymakers of the Synthesis Report of the IPCC Third Assessment Report' (3rd Assessment Report, Intergovernmental Panel on Climate Change, 2001).

Uncertainty is legislatively reinforced.

Despite the embedded GWP numbers, the *National Greenhouse and Energy Measurement Determination 2008* (Cth) (*NGER Measurement Determination*) provides that:

> the *estimation* of emissions released from the operation of a facility *must* include assessment of uncertainty in accordance with Chapter 8.[33]

Section 8.1 of the NGER Measurement Determination provides that uncertainty is to be assessed at three levels – at source, facility and the registered corporation level. The uncertainty must be assessed so that the range for an emissions estimate encompasses the actual amount of the emissions within 95 per cent confidence,[34] using[35] the rules in Part 8.3 of the NGER Measurement Determination, or the *GHG Protocol Guidance on Uncertainty Assessment in GHG Inventories and Calculating Statistical Parameter Uncertainty* published under the GHG Protocol by the World Business Council for Sustainable Development (*WBCSD*) and the World Resources Institute (*WRI*) (*GHG Protocol Uncertainty Guidance*). By way of example, s 8.11 of the NGER Measurement Determination provides:

> For s 8.5(1)[36] and subject to subsections (2) and (3), in assessing uncertainty of the estimates of scope 1 emissions that are estimated using method 1 for a source, the aggregated uncertainty for emissions from the source is to be worked out in accordance with the following formula:
>
> $$D = \pm \sqrt{(A^2 + B^2 + C^2)}$$
>
> where:
>
> *D* is the aggregated percentage uncertainty for the emission source.
>
> *A* is the uncertainty associated with the emission factor for the source, expressed as a percentage.
>
> *B* is the uncertainty associated with the energy content factor for the source, expressed as a percentage.
>
> *C* is the uncertainty associated with the activity data for the source, expressed as a percentage.

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33 *National Greenhouse and Energy Measurement Determination 2008* (Cth) (*NGER Measurement Determination*) s 1.14 (emphasis added).

34 Ibid s 8.2.

35 Ibid s 8.3.

36 Section 8.5(1) of the NGER Measurement Determination provides:

> The total uncertainty of scope 1 emissions estimates for a source in relation to a registered corporation is to be worked out by aggregating, as applicable, the uncertainty of the emissions factor, the energy content factor and the activity data for the source in accordance with the formula in s 8.11.

Uncertainty in the aggregation and interpretation of data embraces scientific uncertainty, statistical uncertainty and estimation uncertainty (both model and parameter uncertainty).[37] From the formula in s 8.11, for example, it will be noted that the particular uncertainties selected are emissions factors, energy content factors and activity data. Consistently throughout Chapter 8 of the NGER Measurement Determination and in the GHG Protocol Uncertainty Guidance, scientific and model uncertainty is eliminated by being put beyond the scope of most inventory efforts.[38]

Although applicable to all liable entities, the rules in the CPRS Bill, the NGER Reporting Regulations and the NGER Measurement Determination are not the process of standardisation – they are the process of commensuration.[39] For through the process, things that in reality are unequal indeed are made to look equal. An AEU would represent the right to emit 1t CO_2-e GHG <u>more or less</u> and within 95 per cent confidence, yet all AEUs would be equal.

Further, in the CPRS Bill, AEUs would be issued for *notional* reductions of emissions attributable to reforestation (Part 10), destruction of synthetic GHG (Part 11) and under certain domestic offset programs (Part 11A). An AEU would be interchangeable with an IEU, each qualifying as an eligible emissions unit.[40] Actual reductions of emissions in Australia would be made equivalent also to *notional* reductions of emissions that arise under CDM and JI offset projects sanctioned under the Kyoto Protocol.

The exploitation of the differences between actual and notional treatment could result in a mismatch between the rules in the CPRS Bill that apply to AEUs issued in the primary market by ACCRA at auction, and those applicable to AEUs acquired free under assistance programs, or under Parts 10, 11, and 11A. There also could be a mismatch between the rules in the CPRS Bill and its regulations and determinations, and the rules in the Kyoto Protocol and CDM Rulebook for CDM projects.

These mismatches would institutionalise differences, notwithstanding the apparent equivalences. Uncertainty and arbitrage opportunities would be in-built into the CPRS

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[37] GHG Protocol, GHG Protocol Guidance on Uncertainty Assessment in GHG Inventories and Calculating Statistical Parameter Uncertainty (*GHG Protocol Uncertainty Guidance*), 2.
[38] Ibid.
[39] Espeland and Stevens, above n 25, 316: 'commensuration transforms qualities into quantities ... It is a way to reduce and simplify disparate information into numbers that can easily be compared.'
[40] CPRS Bill s 5.

Bill and also into the Australian emissions trading market. To borrow a phrase coined by Lohmann (2010), the Australian carbon market would truly be an 'uncertainty market.'[41]

1.5. Ownership of AEUs

The CPRS Bill provides that an AEU would be personal property.[42]

The AEU is clearly a commodity – viz, a product or an article of trade or commerce – and the features distinguishing the rights attaching to ownership illustrate the commodification achieved by the CPRS.

An owner of an AEU, recognised as the holder of the AEU in a Registry account, may hold it, cancel it, surrender it, or sell it. The right to emit GHG into the atmosphere is inherent in the AEU, and would be liberated by surrender.

Ownership of an AEU would not be tied to any obligation by the holder of the AEU to reduce GHG emissions, at any time or in any place.

Ownership of an AEU would not be tied to any obligation to use the AEU to acquit emissions of the holder, at any time or in any place.

'Holding' an AEU would not necessarily equate to beneficially owning an AEU. The definition of 'hold' provides that a person holds an eligible emissions unit if the person is the registered holder of the unit.[43] The registered holder of an AEU means the person in whose Registry account there is an entry for an AEU.[44]

Ownership concepts and restrictions are further examined in s 2.1 of this chapter.

As a general rule, an AEU of a later vintage may not be used to satisfy a reporting obligation of an earlier period (except where a borrowing is permitted). Thus, for example, a liability for the 2013 eligible financial year could not be satisfied by surrendering an AEU to be issued in 2020. As noted in s 1.1, an AEU of an earlier vintage may always be used to satisfy a reporting obligation of a later period (that is, AEUs may be banked (discussed in s 1.12 below)).

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[41] Larry Lohmann, *Uncertainty Markets and Carbon Markets: Variations on Polanyian Themes* (New Political Economy, 2010).
[42] CPRS Bill s 94.
[43] Ibid s 5.
[44] Ibid.

As a commodity, the AEU would be a financial product for the purposes of the Corporations Act, with a unique identification number, marked by the year of first-use (vintage). It would be uncertified, represented instead by an electronic entry in a National Registry.

AEUs would be available for all (liable and non-liable entities) to acquire via auctions of original issues by ACCRA (as noted, this is the primary market).[45]

As bearer instruments AEUs may be easily transferred.[46] They may be acquired by anyone on a public exchange or by private treaty. A market (the secondary market) would emerge for buying and selling of AEUs in Australia.

Ownership could be bifurcated into different interests in the underlying AEU. Section 98A of the CPRS Bill would permit the creation of equitable interests and security interests in AEUs. Section 98A provides:

> (1) This Act does not affect:
> (a) the creation of; or
> (b) any dealings with; or
> (c) the enforcement of;
> equitable interests in relation to an Australian emissions unit.
> (2) Subsection (1) is enacted for the avoidance of doubt.

A (forwards) derivatives market for trading in futures and derivatives is therefore implicitly permitted. Further, none of the provisions of the CPRS Bill would apply in the derivatives market.

In the Green Paper, and in the White Paper, DCC proposed unfettered ownership.[47]

Unfettered ownership means that, theoretically, the right to emit GHG inures for the beneficial owner for the time being of the AEU (not necessarily the registered 'holder'). Critically however, such *ownership* may be disconnected from underlying emissions of GHG (and their reduction) and *disconnected* from *liability* under the CPRS Bill.

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[45] Ibid s 99; note however that AEUs issued free to certain entities may be sold by recipients in a secondary market auction process: CPRS Bill ss 100-102. There will be no power in the regulator to extinguish AEUs without compensation, save for AEUs acquired through fraud on the Commonwealth: CPRS Bill pt 15.

[46] Subject to restrictions on transfer, discussed in this chapter at s 2.1.

[47] DCC, White Paper, above n 8; Department of Climate Change (*DCC*) Australian Government, 'Carbon Pollution Reduction Scheme Green Paper' (Australian Government, Department of Climate Change, 16 July 2008, 150-151; see also Evans & Peck, 'Possible Design for a Greenhouse Gas Emissions Trading System' (Issues Paper, National Emissions Trading Taskforce, 2007); Cramton and Kerr (2002) assert 'both the auction market *and* the secondary market should be open to all.' Peter Cramton and Suzi Kerr, 'Tradeable carbon permit auctions: How and why to auction not grandfather' (2002) 30 *Energy Policy* 333 (emphasis added).

The unfettered ownership potential of AEUs is the central concern of this thesis.

Should the markets for AEUs be open to all?

1.6. Trading of AEUs

Liable entities will compete with other liable entities and with non-liable entities (all non-covered persons and entities including foreign persons and foreign entities) for AEUs. An AEU (representing the right to emit 1t CO_2-e GHG in Australia) will be subjected to demand, making it like any commodity.

Trading in AEUs would be an activity independent of auctioning by ACCRA. All persons and entities would be free to decide whether to acquire AEUs from ACCRA through auction in the primary market or from sellers off-market by private treaty or via an exchange.

Trading in AEUs would be an activity independent of surrendering,[48] cancelling or relinquishing AEUs.

Assuming that liable entities acquire and hold AEUs for surrender, then it might be questioned whether the initial market depth of the Australian carbon market, and hence price (price being affected by the interaction between supply and demand[49]) would be set by non-liable entities, financial institutions, other investors (which could include liable entities) and speculators not obliged to acquire AEUs to acquit GHG emissions.

1.7. Speculation in AEUs

Consideration of the motivation of a non-liable entity for participating in the Australian ETS illuminates potential behaviour and outcomes not related to the reduction of GHG emissions.

Intermediaries (such as hedge funds, investors, financial institutions and speculators) are not liable entities. In this thesis such intermediaries are termed *financial intermediaries.*

Because financial intermediaries are non-liable entities, they face no ETS obligations.

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48 An AEU may only be surrendered once, and upon surrender, is cancelled by ACCRA.

49 Alfred Marshall, *Principles of Economics* (Macmillan and Co, 8th ed, 1920) bk V, ch 2, 332-333.

Bowman (2010) suggests that the 'avarice of banks … could be harnessed to assist the transition to a low-carbon economy. This is because climate change presents lucrative business opportunities for banks as brokers in global carbon markets, and also as financiers and investors.'[50]

Bowman's analysis is focused on identification of the roles of the finance sector in climate change. Bowman attributed to finance entities three roles in particular: capital providers, valuers that price risks, and lenders and shareholders of influence over climate-related corporate governance.[51] Bowman noted 'clear pecuniary and reputational opportunities for banks'[52] and remarked in particular that 'there remains an industry expectation of regionally linked and national carbon markets with profitable brokering and arbitrage opportunities for banks.'[53] Financial intermediaries in an Australian ETS straddle the roles identified by Bowman.

Unless the emissions (scope 1 and scope 2) of the financial intermediaries are above the thresholds of the NGER Act, they are not required to monitor or report their GHG emissions. But even if they are within the NGER Act, they are nonetheless outside the CPRS Bill.

This thesis addresses the trading behaviour of non-liable entities. A synchronisation rule that ties ownership of AEU's and liability under the Australian ETS ensures that trading behaviour is not divorced from the environmental objectives underlying the carbon price framework.

If non-liable entities face liability under the CPRS Bill pro-rata to that faced by liable entities, then the playing field in the carbon market is level.

If non-liable entities do not face liability under the CPRS Bill, then ownership and trading of AEUs does not assist society in achieving the primary aim of reducing GHG emissions.

An AEU, unlike a share in a company, will not pay a dividend. Accordingly, the only financial return capable of realisation upon the acquisition of an AEU (acquired in the

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[50] Megan Bowman, 'The role of the banking industry in facilitating climate change mitigation and the transition to a low-carbon global economy' (2010) 27 *Environmental and Planning Law Journal* 448, 459.
[51] Ibid 451. Bowman does not address herself to the character of the self-interest of the financial sector in participating in the carbon markets.
[52] Ibid 461.
[53] Ibid 460.

primary and/or secondary market) is upon a subsequent sale of the AEU.[54] This is particularly the case for financial intermediaries.

If the selling price of an AEU is less than the acquisition cost (and even without including holding costs), then a loss would be realised upon sale – this will be a loss of some (but unlikely to be all) of the original sum laid out to acquire the AEUs.[55]

Ordinarily, would realising a loss upon surrender or sale (the making of a negative return from a trade) motivate the original acquisition of AEUs by a non-liable entity that does not require the AEUs to cover GHG emissions? Usually not, for the motivation of the financial intermediary would be in accomplishing a positive return – to sell the AEU for more than the cost of acquisition plus the cost of holding until sale (the time cost of money, often equated to the bond rate). Essentially, the financial intermediary would gamble that the price of AEUs will rise in the future, and maybe even rise more than the cost of funds.

Now introduce the financial intermediary into this market.

It must be noted that the financial intermediary probably has not produced any particular commodity, and his or her livelihood does not depend upon his or her production of that commodity (which in some cases, rots if unsold, producing no income). Nor do they have any personal need to consume the commodity. The financial intermediary is really indifferent to the commodity, because they are interested merely in the trade in the commodity.[56] Their livelihood therefore depends upon selling the commodity at a profit. This resale could occur in either the secondary or derivatives markets.[57]

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[54] This feature of AEUs was also recognised by the Australian Government:

> Permit prices, like prices of other financial assets, are expected to, on average, yield a return equal to a market interest rate sufficient to compensate investors for the risk of holding permits. Because permits do not pay dividends or interest, like shares or bonds, the return will come in the form of capital gains. That is, on average, permit values (prices) would be expected to rise at the market interest rate.

DCC, White Paper, above n 8, 9-11. The rise in price of course could be more than the market interest rate.

[55] Noting of course, that surrender of an AEU occurs for nil consideration, resulting in a loss of the entire original sum laid out to acquire the AEU.

[56] The financial intermediary may of course be interested in price volatility caused by market activity aimed at profiting from the commodification of the emission rights, shifting prices and also related trades, for example, if they are taking a position in the energy market, or they are trading spreads.

[57] The Interagency Working Group for the Study on Oversight of Carbon Markets noted:

Marshall (1920) recognised an important assumption about participation of the financial intermediary in the market:

> When a person buys anything for his own consumption, he generally spends on it a small part of his total resources; while when he buys it for the purposes of trade, he looks to re-selling it, and therefore his potential resources are not diminished.[58]

No doubt, the financial intermediary also considers market dynamics, and factors outside the market. In a cap-and-trade ETS, long-run market performance (subject to technology risk) is a function of a reducing emissions cap juxtaposed against a rising population and rising fossil-fuel based energy consumption. In the ETS, price will be determined by the demand and supply tension created by the difference between BAU (with and without measures) and the carbon constrained world.

As supply of rights to emit GHG contracts, demand for the rights to emit GHG could therefore increase (with BAU, even with measures to reduce GHG emissions).

As the gap widens (demand increases, supply contracts) the demand and supply tension tightens over time to reflect scarcity, and thus price increases over time.[59] In Figure 1.1, the gap between an imaginary extension of the red BAU (no measures) line (demand) and the brown indicative national trajectory lines (supply) diagrammatically illustrates that tension.

The acquisition of emission permits by the financial intermediary immediately removes those emission permits from the market (until they are sold again, unless surrendered): self-evidently, the very activity of participating in the market and acquiring the emission permits results in a contraction of supply!

If the financial intermediary were to cancel or surrender AEUs (a magnanimous gesture which would result in the complete loss of the capital invested in the AEUs) then that would assist emission reduction, because those surrendered AEUs would represent

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> Market participants could also seek to enter derivative contracts to actively gain exposure to the price of an underlying commodity … in an attempt to realize profits through the successful anticipation of price movements, or to take advantage of a perceived mispricing with a given market, or between related markets.

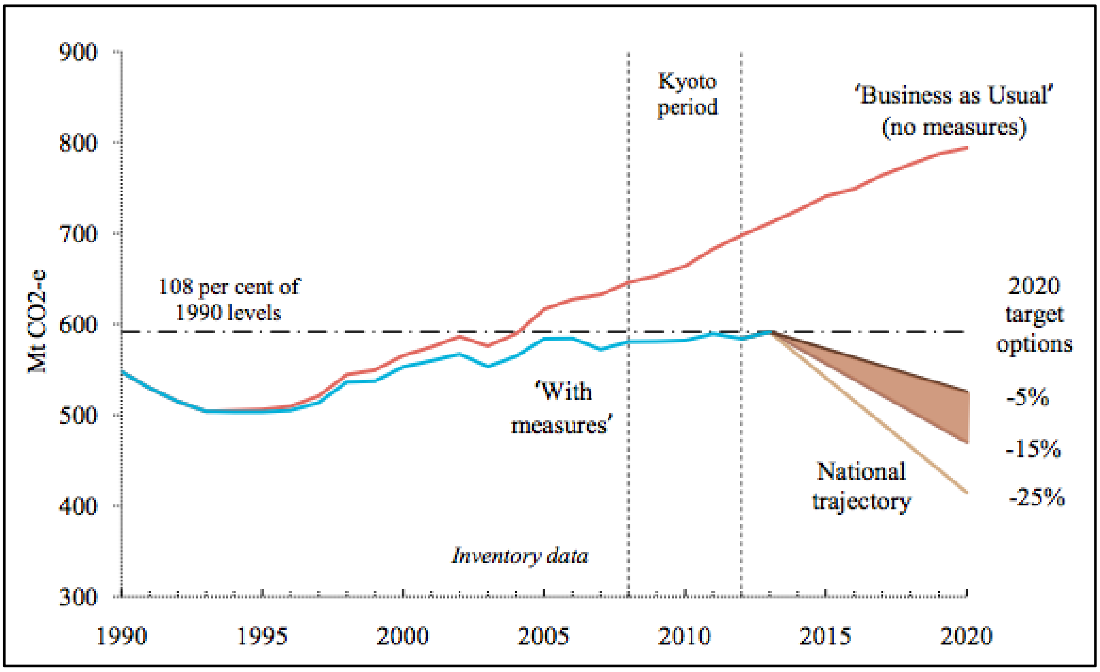
Interagency Working Group for the Study on Oversight of Carbon Markets, 'Report on the Oversight of Existing and Prospective Carbon Markets' (US Commodity Futures Trading Commission, 18 January 2011) 17.

[58] Marshall, above n 49, 335.

[59] Figure 1.1, extracted from Australian Government, Department of Climate Change and Water, 'Tracking to Kyoto and 2020: Australia's Greenhouse Emissions Trends 1990 to 2008-12 and 2020' (Report, Australian Government, Department of Climate Change and Water, 2009).

emissions no longer covered by rights to emit GHG. The contraction in supply would be permanent.

Figure 1.1: Projected demand versus supply



But the financial intermediary knows that the aim of a cap-and-trade ETS is to limit the quantity of GHG emissions into the atmosphere in Australia. There are likely to be emitters that are unable to abate their GHG emissions at a cost at or below the market price of eligible emissions units (albeit the price of AEUs may fluctuate). The financial intermediary gambles that because there will be some emitters who still face the surrender of sufficient units in order to avoid a unit shortfall penalty and make-good under the CPRS Bill, there may be some demand in the secondary market for AEUs (that is, additional to demand in the primary market for AEUs (auctions conducted by ACCRA)).

So financial intermediaries, motivated by not wishing to lose the money invested in the original outlay to acquire the AEUs, and indeed, wishing to make a gain on sale of the AEUs, buy more and hold as much for so long as each can afford, because this activity increases the contraction in supply which pressures price upwards on account of the demand and supply tension inbuilt into the ETS design.

As long ago as 1848, John Stuart Mill attempted to defend the role of financial intermediaries.[60]

Mill argued that the presence of financial intermediaries in the market ensures that excess supply is absorbed and excess demand satisfied at prices that 'are neither so much depressed at one time, nor so much raised at another, as they would be if speculative dealers did not exist.'[61] For Mill, the rise in price occasioned by speculative activity does not result in an adverse impact on market participants or consumers. Market participants are the beneficiaries of quantity and price smoothing. Consumers also are beneficiaries, for Mill confines the ills consumers (the public) can suffer from financial intermediaries to the heightening of price fluctuations caused by speculation.

Mill asserts that financial intermediaries, individually and collectively, cannot gain by a price rise solely of their own creating. In contra distinction, the thesis asserts that CPRS design fundamentally changes this market dynamic. Because of the inherent and increasing demand and supply tension arising from the gap between BAU emissions and continually reducing capped quantities of emissions under the CPRS, there may never be a reduction in price. As financial intermediaries withdraw AEUs from the market, there is yet further pressure bearing upon supply, and hence price. Mill's defence of the role of financial intermediaries cannot support a CPRS design rule permitting unfettered ownership, for it is no longer an apt defence when the speculation is so privileged with opportunities for profit.

Further, surely the benefit to the public of an ETS should be the reduction of emissions? In contrast to Mill (and others, discussed infra), this thesis suggests that any benefit to society from the presence in the carbon markets of financial intermediaries should be a benefit consistent with the primary aim of reducing GHG emissions. If an ETS is the mechanism that moves liable entities towards the primary aim, and their liability is satisfied by surrender of the State created rights (emissions units, being AEUs or IEUs) which are the currency of the ETS, then ownership and use of the currency by non-liable entities should be linked to activity directed to the primary aim.

The playing field in the carbon markets will only be equal if liability of market participants is equal.

[60] John Stuart Mill, *Principles of Polictical Economy* (Liberty Fund, first published 1848, reproduced in JM Robson (ed), *The Collected Works of John Stuart Mill,* Liberty Online Library ed, 1965) 714.
[61] Ibid.

1.8. Acquisition in primary markets (auctions)

The regulator (ACCRA) would control the release of the stock of AEUs into the market via auction.

If the CPRS cap is set at 75 per cent of Australia's latest recorded GHG emissions[62] and released proportionally each month of the year, 34 million AEUs would be auctioned monthly. In these numbers, the AEU would truly be commodified.

It is intended that in any eligible financial year there would be 12 auctions of the single vintage AEUs that may be surrendered for the current period. Because the period for acquittal spans 17.5 months, a total of 16 auctions for each vintage would be conducted. Auctioning would start prior to CPRS commencement, and ahead of each eligible financial year. There would be at least one auction between the end of the reporting year (30 June) and the surrender date (15 December). It is also intended that there would be an annual auction of AEUs of vintages for the following three years.

ACCRA would be in charge of the auction supply of AEUs to the market, however it would be required to fully acquit the annual stocks of AEUs predetermined by the CPRS cap and targets and trajectories. ACCRA would have no discretion to vary the annual supply of AEUs in order to achieve tighter emission reduction targets, further indication of commodification and disconnection between AEUs and underlying GHG emissions.

The AEU auctions[63] would be ascending clock auctions[64] – the vendor (ACCRA on behalf of the Government) would set a price (effectively a reserve), and keep increasing the price until demand matches supply (at which point, the last price bid becomes the

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[62] The latest available figures are for the 2010 June quarter. DCCEE estimate Australia's 2009 GHG emissions to be 548Mt CO_2-e: Department of Climate Change and Energy Efficiency Australian Government, 'Quarterly Update of Australia's National Greenhouse Gas Inventory: June Quarter 2010' (Report, Australian Government, Department of Climate Change and Energy Efficiency, 2010).

[63] Auctioning departs from the current approach of the EU ETS (discussed further in chapter two). In Europe, detailed *National Allocation Plans* (*NAPs*) for covered enterprises were formulated by member States. In phase one of the EU ETS, from 2005 to 2007, 95 per cent of *European emissions allowances* (*EUAs*) were issued free, and in phase two, from 2008 to 2012, 90 per cent of EUAs are to be issued free: art 10 of *Commission Commission Directive (EC) No 87/2003 of 25 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Commission Directive 96/61/EC* [2003] OJ L 275/32, 36. The EU ETS trade volume exceeded €60 billion in 2007, and €100 billion in 2010, an increase of 171 per cent in trade volume. Auctioning is planned to commence in the EU ETS from 1 January 2013.

[64] DCC, White Paper, above n 8, 9-26 (Policy Position 9-11). In an ascending clock auction, as price increases during each successive round, bidders may make new bids for quantities at the new price.

clearing price). In the case of the annual auction of forward vintages, the ascending clock auctions would be simultaneous.

Regulations to detail the rules and procedures of auctions were planned to be introduced subsequent to the passage of the CPRS Bill. Those regulations were to be designed having regard to principles set out by DCC in the White Paper:

> To promote allocative efficiency and efficient price discovery a well designed auction will include:
> - a large competitive field of bidders;
> - a simple system that encourages participation;
> - a stable set of auction rules that are not subject to arbitrary or unpredictable changes;
> - transparent processes that rapidly reveal price information; and
> - minimal fees, charges and other costs of participation (although some rules to ensure that bids are credible will be desirable).[65]

Consistent with unfettered ownership of AEUs, there would be no limitation at all on participation in the auction process (the primary market). DCC, Evans & Peck (2007) and Cramton and Kerr (2002) link auction participation with market liquidity. 'The less liquid the issue is, the greater is the transaction cost. Illiquidity not only costs the seller money, but it also reduces auction efficiency.'[66]

However, DCC proposed that participants would need to demonstrate creditworthiness (and perhaps, bid for a minimum tradeable parcel). The auction therefore allows liable entities and non-liable entities collectively to determine the allocation of the AEUs as property.

Not all AEUs would be auctioned as millions of AEUs would be issued free under assistance programs (discussed in s 1.13 below). Holders of AEUs issued free may be allowed to participate as vendors in the auction process, in addition to being able to sell into the market.

Betz et al (2010),[67] Evans & Peck, and Cramton and Kerr argue that auctioning is superior to grandfathering, and 'it is always more efficient to auction.'[68] Cramton and Kerr nonetheless suggest that an ascending clock auction may be inefficient because:

> bidders shade their bids (bid below their true demand curves) in order to

[65] Ibid 9-7, 9-22ff (Policy Position 9-10).
[66] DCC, Green Paper, above n 47; Evans & Peck, above n 47; Cramton and Kerr, above n 47, 335.
[67] Regina Betz et al, 'Auctioning greenhouse gas emissions permits in Australia' (2010) 54 *Australian Journal of Agriculture and Resource Economics* 219.
[68] Cramton and Kerr, above n 49, 339.

> keep the price down. Large bidders tend to shade more than small bidders, since a particular price effect has a bigger impact on profits for a large bidder. This differential shading leads to an inefficient outcome. Large bidders tend to win too little and small bidders tend to win too much.[69]

Cramton and Kerr strongly recommend the use of activity rules. One particular activity rule they suggest is that each bidder in the auction cannot *increase* its quantity as price rises,[70] a rule designed to counter the way financial intermediaries might operate in the ETS.

The public interest in designing auction participation with a synchronisation rule is discussed further in chapter six.

1.9. Acquisition in secondary markets (transfer of AEUs)

It is intended that an AEU may be transferred without restriction.[71]

An AEU would be created a freely tradeable commodity and may be transmitted by assignment[72] or by operation of law.[73]

The creation of equitable interests and security interests in AEUs would be permitted.[74]

Ownership of AEUs would be unfettered.

The only operative rule would be that AEUs would need to be in a Registry account in order to be transferred or surrendered. These limited restrictions to transfer included in the CPRS Bill, include that legal title would only be transferred by entry in the National Registry, and the transferee must hold a Registry account (see s 2.1).[75] This means that under the CPRS Bill, ownership of AEUs would be necessary for secondary and derivatives market participants (because only AEUs legally held on the Australian National Registry may be surrendered to discharge obligations under the CPRS Bill). AEUs would be required to be legally owned, as a minimum, in order to achieve the physical delivery necessary to support secondary market trading and derivatives activity.

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[69] Ibid 338.
[70] Ibid.
[71] DCC, White Paper, above n 8, 8-5 (Policy Position 8.1).
[72] CPRS Bill, s 96.
[73] Ibid s 97.
[74] Ibid s 98A.
[75] Ibid s 95, s 98.

1.10. Interface with derivatives markets

The CPRS Bill is silent on the interface between primary, secondary and derivatives markets.[76] The rules of the CPRS Bill would not apply in the derivatives market.[77] No cap would apply in the derivatives market.

The only operative rule would be that underlying AEUs would need to be in a Registry account in order to be transferred or surrendered.[78]

1.11. International linking with other ETS

AEUs would not initially be exported, but by design, the CPRS accommodates international linkage.[79] The CPRS Bill proposed to link Australia's GHG emission reduction efforts to the UNFCCC[80] and the Kyoto Protocol.[81]

After 2013, an AEU may be substitutable (without limitation if the carbon price framework follows the CPRS Bill) with IEUs (which, as noted, comprise Kyoto units (CERs, ERUs and RMUs) and non-Kyoto units) to acquit liability under the CPRS Bill. Thus, qualifying reduction credits arising from certain international projects (CDM

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[76] See Introduction, n 69. As noted, the aim of derivatives markets is to help parties who have price exposure to an underlying asset to transfer their risk to other parties – usually either hedgers or speculators – who are capable of assuming such risk. The United Kingdom House of Lords said of derivatives and the derivatives market:

> A derivatives contract involves one party reducing its risk, and the other taking on risk associated with an underlying asset. This allows parties to speculate on the values of underlying assets, without necessarily having any actual interest in the asset itself. This use of derivatives for speculating on prices, coupled with the lack of transparency in the derivatives market as a whole, can lead to parties taking on too much risk and potentially destabilising the financial system. ... As witnesses told us, *derivatives have sound economic and commercial benefits, and have been and remain necessary to the development of trade and commerce, but the manner in which they are used can pose a risk to the system …*
>
> *Derivatives have an important economic function, namely redistribution of risk, but some forms of derivatives can be used as tools for speculation by participants in the financial market who have ownership of the underlying asset. Coupled with a lack of transparency in the market, where build-ups in risk cannot be detected by actors or supervisors, derivatives could help destabilise the financial system, particularly if there is a significant shift in the value of underlying assets***.**

House of Lords European Union Committee, 'The future of regulation of derivatives markets: is the EU on the right track?' (10th Report of Session 2009-10: Report with Evidence, House of Lords, United Kingdom Parliament, 2010) 17, 21 (emphasis in original).

[77] Ibid.

[78] Ibid ss 95, 98. These rules do not affect transfer of the derivative instrument.

[79] An eligible emissions unit includes an eligible international emissions unit: CPRS Bill s 5.

[80] *United Nations Framework Convention on Climate Change,* opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994).

[81] *Kyoto Protocol,* opened for signature 16 March 1998, UN Doc. FCCC/CP/1997/7/Add.1, 10 December 1997 [being the Report of the Conference of the Parties on its third session, held at Kyoto from 1 to 11 December 1997] (entered into force 16 February 2005).

projects and JI projects) will qualify as eligible emissions units in Australia, even though the emissions reduction does not occur in Australia.

However, assigned amount units (*AAUs*) under the Kyoto Protocol would not be accepted for compliance under the CPRS.

The design of the CPRS Bill leaves open the possibility for future direct linkage with emissions trading schemes in other countries (which are only indirectly linked through the recognition of credits from CDM and JI projects). During the early phase of the CPRS, the scope for linking to the EU ETS and the NZ ETS will be limited, however, ACCRA will be empowered to determine the eligibility for linking to these and other emissions trading schemes.

1.12. Banking and borrowing

AEUs (other than fixed price or safety valve AEUs) may be hoarded (banked) without limitation. This is yet another feature of AEUs indicative of their commodification. In the White Paper, DCC suggested that:

> In general, intertemporal flexibility will improve allocative efficiency by allowing abatement to occur at the time that imposes the lowest relative cost on the economy. It will also have the effect of smoothing prices over time. However, even with intertemporal flexibility, the carbon price can display some volatility.[82]

Cramton and Kerr argue that there is no environmental loss through banking because current emissions are reduced to that extent.[83] However, this assertion is not technically accurate, because permanent emissions reductions can only be achieved if eligible emissions units are cancelled or surrendered.

A further indication of commodification is that liable entities may be able to satisfy a current surrender obligation by borrowing up to five per cent of their current obligation. The borrowing is permitted from a future AEU vintage held by the liable entity (rather than borrowing from the Regulator).

1.13. EITE and strongly affected industries

Transitional assistance measures would apply for emitters in emissions intensive trade exposed (*EITE*) and strongly affected industries (the stationary power industry and the

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[82] DCC, White Paper, above n 8, 8-9.
[83] Cramton and Kerr, above n 47, 335.

coal industry). The assistance under Part 8, Part 8A and Part 9 of the CPRS Bill, which is planned to last for up to 30 years, involves an allocation of free AEUs made at the start of the reporting period (subject to certain conditions, including continued output).

The issue of free AEUs is called grandfathering, because the free AEUs will cover (in part) the GHG emissions profile of the recipients, based on an allocation methodology and historic emissions of GHG. Those allocation methodologies are reflective of commodification of the free AEUs because they are designed to ensure that Australia does not breach its obligations to the World Trade Organisation (*WTO*).[84] They are benchmarked on the industry averaged emissions profile of the affected industries as moderately or highly emissions intensive (although allocation to any emitter will be reflective of the actual circumstances of the emitter) and other matters, such as trade exposure and compensation for structural adjustment in order to preserve capital values and employment.[85]

1.14. Taxation treatment not linked to GHG emissions performance

As a further indication of commodification, specific amendments were proposed to the income tax law (new part 3-50 of the *Income Tax Assessment Act 1997* (Cth)(*1997 Tax Act*))[86] to make it clear that an income tax deduction would be allowed for the purchase of AEUs. Conversely, any gain realised on a disposal of AEUs by trade would be included in assessable income. Accordingly, the proposed taxation regime would align the income tax deduction for acquisition of AEUs with the period in which the AEUs would be surrendered. Deductibility for income tax purposes would not be related to GHG emissions.[87]

AEUs would be treated as trading stock, just like any other commodity. AEUs carried on balance sheet at the end of the financial year would be brought to account as trading stock in accordance with Division 70 of Part 2-25 of the 1997 Tax Act. A once only trading stock election for cost or market valuation in respect of banked AEUs at balance date would be available (within the first five years). Election to carry AEUs at cost or market value would be unrelated to CPRS liability and GHG emissions reductions.

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[84] DCC, White Paper, above n 8, chs 12-13.
[85] Ibid chs 12-13.
[86] CPRS Consequential Amendments Bill sch 2.
[87] Proposed div 70 of pt 2-25 of the *Income Tax Assessment Act 1997* (Cth) (*1997 Tax Act*).

2. CPRS DESIGN RESTRICTING COMMODIFICATION

Restrictions on the free trade of AEUs were proposed in the CPRS Bill. Along with the Parliamentary consideration of the *Bill* for the *Carbon Pollution Reduction Scheme Act 2009* (Cth), and up to the introduction of the CPRS Bill, draft *Carbon Pollution Reduction Scheme Regulations 2009* (*CPRS draft regulations*) and amendments to the Corporations Act and Corporations Regulations were proposed. During 2010 the legislative landscape shifted. The CPRS Bill lapsed, but the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth) was passed.[88]

The landscape continues to change. The carbon price framework was announced on 24 February 2011. On 24 March 2011, as part of the CFI, the Minister introduced the *Australian National Registry of Emissions Units Bill 2011* (Cth) into the House of Representatives. The chapter now turns to discuss the CPRS Bill, the enacted laws and the draft laws and regulations, as they bear or might bear upon the design of the emissions unit.

Of critical note in the design features of the CPRS Bill and the Corporations Act that potentially restrict tradability or otherwise impose a fetter upon ownership rights in AEUs, is the fact that the provisions do not contain any specific regime to regulate desirable conduct in relation to holding and trading of AEUs. It is evident that in the anti-avoidance provisions, the unit shortfall penalty, make good, and civil penalty provisions of the CPRS Bill discussed below, there is *no* language that would *directly* attend to preferred behaviour being the reduction in GHG emissions.

2.1. Limits on ownership and transfer

The only control in the CPRS Bill on the issue or transfer of an AEU would be the requirement that a person to whom the AEU is to be issued or to be transferred must have a Registry account.[89] Save for the requirement to hold a Registry account, there would be no restriction on who may acquire AEUs in any of the markets (i.e. at auctions or through an exchange or by private agreement).[90]

[88] Act No 26 of 2010.
[89] CPRS Bill ss 87(3), 95.
[90] DCC, White Paper, above n 8, 7-46.

The rules for opening a Registry account were set out in Part 7 of the CPRS Bill and in a consultation draft of Carbon Pollution Reduction Scheme Regulations 2009 (*CPRS draft regulations*) released 30 October 2009. It would be expected in the carbon price framework that the Registry account opening rules would replicate each of these sources and be consistent with the Australian National Registry of Emissions Units Bill 2011 (Cth).

The Registry account opening rules are focused upon establishment of identity.

This thesis argues that whatever means are institutionalised for establishing identity, the mere fact of establishing identity does not discern purpose (for example, whether eligible emissions units will be held for surrender, cancellation or for sale) nor, of itself, act as a deterrent to aberrant behaviour. Accordingly, in chapter five this thesis proposes substantive amendments to Registry account opening procedures in s 147 of the CPRS Bill. It is to the Registry account opening rules in the CPRS Bill (and related legislation) that the chapter now turns.

A. CPRS Registry account rules

Section 147 of Part 7 of the CPRS Bill specified the requirements for opening a Registry account:

> **147 Opening of Registry accounts—general**
>
> (1) A person may request the Authority to open a Registry account in the name of the person.
>
> (2) A request under s (1) must:
>
> (a) be in writing; and
>
> (b) be in a form approved, in writing, by the Authority; and
>
> (c) be accompanied by such information as is specified in the regulations; and
>
> (d) be accompanied by the fee (if any) specified in a legislative instrument made by the Authority for the purposes of this paragraph.
>
> (3) The approved form of request may provide for verification by statutory declaration of statements in requests.
>
> (4) A fee specified under paragraph (2)(d) must not be such as to amount to taxation.
>
> *Further information*
>
> (5) The Authority may, by written notice given to the person who made the request, require the person to give the Authority, within the period specified in the notice, further information in connection with the request.

(6) If the person breaches the requirement, the Authority may, by written notice given to the person:

(a) refuse to consider the request; or

(b) refuse to take any action, or any further action, in relation to the request.

Opening of account

(7) After considering the request, the Authority may open a Registry account in the name of the person.

Identification procedure

(8) The Authority must not open a Registry account in the name of the person unless the Authority has carried out the applicable identification procedure in respect of the person.

Timing

(9) The Authority must take all reasonable steps to ensure that a decision is made on the request:

(a) if the Authority requires the person who made the request to give further information under s (5) in relation to the request—within 28 days after the person gave the Authority the information; or

(b) otherwise—within 28 days after the application was made.

Refusal

(10) If the Authority decides to refuse to open a Registry account in the name of the person who made the request, the Authority must give written notice of the decision to the person.

Section 5 of the CPRS Bill defines 'person' exclusively to be any of the following:

(a) an individual;
(b) a body corporate;
(c) a trust;
(d) a corporation sole;
(e) a body politic;
(f) a local governing body.

The White Paper proposed that CPRS regulations would require the giving of certain proof of identity information in the application for a Registry account, for example, for individuals a passport or tax file number (*TFN*), or for companies an Australian Company Number (*ACN*) or Australian Business Number (*ABN* or *ABRN*), and an address for service and place of business or residence.[91]

The CPRS draft regulations released 30 October 2009 foreshadowed the information that ACCRA would request pursuant to s 147(2)(c) of the CPRS Bill, and the applicable identification procedures.

Generally, a request to open a Registry account in the name of a person is to be accompanied by the following information about the person:

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[91] Ibid.

- the person's full name, address and contact details;
- whether the person is applying as an individual, body corporate, corporation sole, body politic, local governing body or trust; and
- the person's ABN, ARBN and registration number (if any) for goods and services tax (*GST*).[92]

Individuals would be required to include date of birth and residential address,[93] and if a sole trader, information about business name, registration and address of main place of business.[94]

Relevantly, non-individuals are to include the following information:

- the person's trading name;
- the person's ACN;
- the person's registered Australian office address;
- the person's main place of business;
- the country in which the person was formed, registered or incorporated;
- the State, Territory or Province in which the person was formed, registered or incorporated;
- the date the person was formed, registered or incorporated;
- the name of each company director (or equivalent) of a body corporate;
- the name and address of each trustee of a trust;
- the name and address of an individual constituting a corporation sole;
- the name of the legislation under which a person is established; and
- the name, contact details and position of an individual who is authorised to make the request to open the Registry account for the person, and the person(s) nominated as the authorised representative in relation to the Registry account.[95]

The CPRS draft regulations provided that if a person is a proprietary or private company, a request to open a Registry account must also include the name and address of any beneficial owner, defined to mean an individual who owns, through one or more

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[92] *Carbon Pollution Reduction Scheme Regulations 2009* (Consultation draft, 30 October 2009) (*CPRS draft regulations*), r 7.1(1).
[93] Ibid r 7.1(2).
[94] Ibid r 7.1(3).
[95] Ibid rr 7.1(4), 7.1(5).

share holdings, over 25 per cent of the issued capital in the company.[96] If the person 'is a trust' the information must also include the name of each beneficiary of the trust, or if the terms of the trust identify the beneficiaries of the trust by reference to membership of a class, details about the class.[97]

The ability to request further information under s 147(5), coupled with the use of the words 'may open' in s 147(7) of the CPRS Bill, arguably vested in ACCRA further limited discretion to refuse to open a Registry account, even where the identification procedure has been carried out. The provisions do not mandate the opening of a Registry account, for example, if the application is correctly completed and information requested properly supplied and authentic. Rather, it would be open to ACCRA to be satisfied, after considering the applicant's request to open a Registry account, that an account should be opened. Having regard to the design rule, however, it would be expected that the grounds for not been satisfied must necessarily be limited, so an attempt to decline the opening of a Registry account for a financial intermediary merely because the applicant intends to speculate in the market for AEUs would not be a sufficient ground for ACCRA to refuse to open an account.

Subsection 147(8) of the CPRS Bill would prohibit ACCRA from opening a registry account if ACCRA has not carried out the applicable identification procedure.

Proposed regulation 7.3 of the draft regulations outlined the applicable identification procedure and identity evidence (to be in English, or translated into English (by an authorised translation service)) required by ACCRA:

- if the person is an individual — certified copies of 2 individual identification documents,[98] at least one of which is a primary photographic identification document[99] or a primary non-photographic identification document;[100]

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[96] Ibid r 7.2. The purpose of this regulation is to address the problem of the money laundering technique of using a 'front' company to undertake transactions: see Australian Government Department of Climate Change, 'Commentary on the exposure draft regulations relating to dealings with emissions units and the operation of the Australian National Registry of Emissions Units' (Issues Paper, Australian Government, Department of Climate Change, November 2009) [61].

[97] Ibid. The term 'trust' is not defined in the regulations. In s 5 of the CPRS Bill 'trust' is defined to mean a person in the capacity of trustee or, as the case requires, a trust estate. 'Trustee' and 'trust estate' are defined to have the same meaning as in the 1997 Tax Act. A trust is the relationship that subsists between a person (the trustee) that holds trust property and the objects for whose benefit that trust property is held.

[98] 'Individual identification document' is defined by r 7.3(5) to be one of the following: (a) a primary photographic identification document (see footnote 99 below); (b) a primary non-photographic identification document (see footnote 100 below); or (c) a secondary identification document. A

- if the person is a company — a certified copy of the company's certificate of incorporation or registration in its place of origin, or a document of similar effect, and a company identification document;[101]
- if the person is an incorporated association — a certified copy of the association's certificate of incorporation or equivalent, issued under a law of a State, Territory or the Commonwealth, and a non-individual identification document;[102]
- if the person is a body established under legislation — a non-individual identification document;

'secondary identification document' is defined by r 7.3(5) to be any of the following: (a) a notice that: (i) was issued to an individual by the Commonwealth, a State or Territory within the previous twelve months; and (ii) contains the name of the individual and his or her residential address; and (iii) records the provision of financial benefits to the individual under a law of the Commonwealth, State or Territory (as the case may be); (b) a notice that: (i) was issued to an individual by the Australian Taxation Office within the previous 12 months; and (ii) contains the name of the individual and his or her residential address; and (iii) records a debt payable to the individual by the Commonwealth, or by the individual to the Commonwealth, under a Commonwealth law relating to taxation; (c) a notice that: (i) was issued to an individual by a local government body or utilities provider within the previous three months; and (ii) contains the name of the individual and his or her residential address; and (iii) records the provision of services by that local government body or utilities provider to that address or to that person; (d) if the person is under the age of 18 — a notice that: (i) was issued to a person by a school principal within the previous three months; and (ii) contains the name of the person and his or her residential address; and (iii) records the period of time that the person attended at the school; (e) any other document which the Authority is satisfied provides evidence of identification equivalent to that mentioned in paras (a) to (d).

[99] 'Primary photographic identification document' is defined by r 7.3(5) to be any of the following: (a) a licence or permit issued under a law of a State or Territory or equivalent authority of a foreign country for the purpose of driving a vehicle that contains a photograph of the person in whose name the document is issued; (b) a passport issued by the Commonwealth; (c) a passport or a similar document issued for the purpose of international travel, that: (i) contains a photograph and the signature of the person in whose name the document is issued; and (ii) is issued by a foreign government, the United Nations or an agency of the United Nations; (d) a card issued under a law of a State or Territory for the purpose of proving the person's age which contains a photograph of the person in whose name the document is issued; (e) a national identity card issued for the purpose of identification, that: (i) contains a photograph and the signature of the person in whose name the document is issued; and (ii) is issued by a foreign government, the United Nations or an agency of the United Nations; (f) any other document which the Authority is satisfied provides evidence of identification equivalent to that mentioned in paras (a) to (e).

[100] 'Primary non-photographic identification document' is defined by r 7.3(5) to be any of the following: (a) a birth certificate or birth extract issued by a State or Territory; (b) a citizenship certificate issued by the Commonwealth; (c) a citizenship certificate issued by a foreign government; (d) a birth certificate issued by a foreign government, the United Nations or an agency of the United Nations; (e) a pension card issued by Centrelink that entitles the person in whose name the card is issued, to financial benefits; (f) any other document which the Authority is satisfied provides evidence of identification equivalent to that mentioned in paras (a) to (e).

[101] 'Company identification document' is defined by r 7.3(5) to be either of the following: (a) a certified copy of a document from the Australian Securities and Investment Commission that identifies the person's ARBN; (b) a non-individual identification document (see footnote 102 below).

[102] 'Non-individual identification document' is defined by r 7.3(5) to be either of the following: (a) a certified copy of a document from the Australian Taxation Office that identifies the person's ABN or GST registration number; (b) any other document which the Authority is satisfied provides evidence of identification equivalent to that mentioned in para (a).

- if the person is a corporation sole or body corporate (not mentioned above) — a certified copy of a document evidencing the person's corporate status and a non-individual identification document; and
- if the person is a trust — a certified copy of the trust deed, or certified copy of an extract of the trust deed, that identifies the trustees, or a document of similar effect, and for each trustee:
    - if the trustee is an individual — the documents required for individuals; or
    - if the trustee is not an individual — a non-individual identification document.

The Authority must consider all the evidence of identity. It would be unusual for ACCRA to hide behind a failure to carry out a required identification procedure as a tactic to slow down or avoid registering an applicant. Indeed, it would be expected that s 7 of the *Administrative Decisions (Judicial Review) Act 1977* (Cth) would allow an administrative law order to force ACCRA to carry out such procedures, and if identity was proved, to open a Registry account.

Neither s 147 nor the CPRS draft regulations require the assumption by the applicant of CPRS Bill obligations or the giving of any undertaking as to behaviour, or an agreement to limit the number of AEUs that may be acquired or disposed by the applicant. There is a possibility under regulations to be promulgated pursuant to the Australian National Registry of Emissions Units Bill 2011 (Cth) that a transaction limit may apply within Registry accounts (discussed below). This thesis recommends that ACCRA should retain such discretion.

Establishing identity would be a step to ensure that holders of AEUs are credible. Although Registry account information would be published by ACCRA (discussed in s 2.4) the first step does not appear onerous. Once identity is established and a Registry account opened, universal participation would allow non-liable entities, including financial intermediaries, to participate in the ETS.

When enacted, the Australian National Registry of Emissions Units Bill 2011 (Cth) and regulations to be promulgated pursuant to it should model the minimum Registry account opening procedures in the Australian ETS. The chapter turns now to discuss the Australian National Registry of Emissions Units Bill 2011 (Cth).

B. Australian National Registry of Emissions Units Bill 2011 (Cth)

The Australian National Registry of Emissions Units Bill 2011 (Cth) continues the *Australian National Registry of Emissions Units* (*ANREU*). The ANREU was established by DCCEE under the executive power of the Australian Government, and initialised with the International Transaction Log managed by the UNFCCC Secretariat on 19 December 2008, in order to hold Kyoto units.

A *Carbon Credits Administrator* (*CCA*) to be established by Part 25 of the CFI Bill is to be the administrator of the ANREU.

Regulations to be promulgated under the CFI Bill would prescribe the rules for and in relation to empowering the CCA to open accounts within the ANREU (called a Registry account) in the name of a particular person,[103] and for identification procedures that must be carried out before a Registry account is opened.[104]

Currently, account opening within the ARNEU is governed by the ARNEU Terms and Conditions.[105] Such terms and conditions form part of a contract made between DCCEE and the account holder, at the time of opening of a Registry account. However, the regulations to be promulgated for ss 10 and 11 of the Australian National Registry of Emissions Units Bill 201*1* (Cth) could merely reproduce the CPRS draft regulations, as discussed above, or incorporate them as a minimum requirement, augmented as recommended by this thesis.

Section 11 of the Australian National Registry of Emissions Units Bill 2011 (Cth) provides that the regulations may declare a 'transaction limit' for the purposes of s 11, and certain Registry accounts. If a Registry account is subject to a transaction limit, then the CCA must not issue any ACCUs to that account, or comply with an instruction to transfer units to that account, if so doing would result in the account exceeding its transaction limit. This thesis supports such transaction limits.

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[103] *Australian National Registry of Emissions Units Bill 2011* (Cth), s 10.
[104] Ibid s 11.
[105] DCC, *Application Pack (for individuals) Australian National Registry of Emissions Units* (2009) Australian Government, Department of Climate Change <http://www.climatechange.gov.au/government/initiatives/~/media/publications/international/anreu-individual_pack-pdf.ashx>.

Subsection 16(6) of the Australian National Registry of Emissions Units Bill 2011 (Cth) also provides that if CCA has closed a person's Registry account, and the person applies to open another Registry account, then the CCA must refuse to open a new account.

C. Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (Cth)

Division 2 to Division 6 of Part 2 of the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth) provide that a reporting entity (as defined) must verify a customer's identity before providing a 'designated service.' The action to be taken is specified in the *Anti-Money Laundering and Counter-Terrorism Financing Rules Instrument 2007 (No 1)* (Cth) (*AML/CTF Rules*).

The identification provisions of the proposed s 147 of the CPRS Bill and CPRS draft regulations were influenced by the AML/CTF Rules to an extent. The AML/CTF Rules should similarly influence the regulations for opening a Registry account under the Australian National Registry of Emissions Units Bill 2011 (Cth).

For an individual, the AML/CTF Rules include having 'risk-based systems and controls that are designed to enable the reporting entity to be reasonably satisfied, where a customer is an individual, that the customer is the individual that he or she claims to be' (called 'know your client' (*KYC*)). KYC information to be collected and verified (by reliable and independent documentation) includes the full name, date of birth and residential address of the customer, and if a sole trader, the business name, ABN and principal place of business of the customer.

For an Australian incorporated company, the information to be collected and verified includes the full name of the company as registered by ASIC, the full address of the company's registered office, the full address of the company's principal place of business (if any), the ACN issued to the company, details as to whether the company is registered by ASIC as a proprietary or public company, and, if the company is registered as a proprietary company, the name of each director of the company.

To date, the issue of an AEU or any derivative in relation to an AEU has not been defined as a designated service.[106] This thesis recommends such designation.

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[106] Note however that the issue of a carbon credit unit under the CFI Bill and the issue of an eligible IEU are proposed to be a designated service.

2.2. Limitations to fixed price AEUs

From commencement up until the transition to the cap-and-trade ETS, the carbon price framework proposes a closed scheme. Ownership rights in AEUs would be fettered.

The CPRS Bill proposed that an AEU at a fixed price be issued for the first year only, whereas the carbon price framework envisages that the fixed price period might last three to five years.[107]

In the CPRS, after the first year, it was proposed that there would be a four year transitional period of a safety valve mechanism during which fixed price AEUs may be acquired, starting at A$40 per AEU, and rising by the *consumer price index* (*CPI*) and five per cent per annum for the next four transitional years.[108]

The approach of ss 88 and 89 of the CPRS Bill to these fixed price AEUs was to provide that they could only be acquired by liable entities.

Subsection 89(2) of the CPRS Bill provided that the number of fixed price AEUs that a person could apply to ACCRA for issue:

> must not exceed the number worked out using the following formula:
>
> Person's emissions number for the vintage year - Total number of eligible emissions units surrendered by the person in relation to the vintage year

Only liable entities under Part 3 could have an emissions number.

Further, upon acquisition of fixed price AEUs, they would be immediately surrendered. Fixed price AEUs may not be transferred, cancelled or relinquished.[109]

No non-liable entities would participate in the Australian ETS until 2015 at the earliest.

2.3. Penalties

Two key provisions of the CPRS Bill that would influence the behaviour of liable entities are:

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[107] The fixed price in the first year of the CPRS was to be A$10. Professor Garnaut suggests that the fixed price in the carbon price framework should commence at A$20 at least (Ross Garnaut, 'Carbon pricing and reducing Australia's emissions' (Garnaut Climate Change Review – Update 2011: Update Paper 6, Garnaut Climate Change Review, March 2011)).
[108] CPRS Bill s 89.
[109] Ibid s 89(5).

- s 132, which provides for exposure to penalties (a unit shortfall penalty) if a liable entity does not surrender sufficient eligible emissions units to cover emissions; and
- s 125, which defines emissions number, which in turn imports the concept of make-good number (s 142) for under surrender of eligible emissions units.

Section 132 provides:

> *If:*
> *(a) a person is a liable entity for an eligible financial year (the current eligible financial year); and*
> *(b) the person's emissions number for the current eligible financial year is 1 or more; and*
> *(c) …;*
> *the person must take such action, by way of the surrender of eligible emissions units, as is necessary to ensure that at the end of 15 December in the next eligible financial year, the person does not have a unit shortfall for the current eligible financial year.*

In a departure from normal Australian Government secrecy laws, the compliance status of liable entities would be published by ACCRA.

A. Unit shortfall penalties/make good

A penalty for non-compliance – the unit shortfall penalty – would be imposed on CPRS liable entities if they fail to surrender any eligible emissions units by the surrender date of 15 December, or if they fail to surrender sufficient eligible emissions units by the surrender date, or over-borrow eligible emissions units from the next compliance period or if ACCRA determines that there is a unit shortfall.[110] The unit shortfall penalty has not been set at a significant out-of-market price above the cost of compliance – (pre-tax) it is limited to the higher of 110 per cent of the BAAP achieved for AEUs in the eligible financial year, and 110 per cent of the fixed price AEU (i.e. during the transitional safety valve period). Failure to pay the unit shortfall penalty would result in a debt to the Australian Government, which would also accrue interest at the non-tax deductible rate of 20 per cent per annum.

The obligation to surrender the correct number of EEUs continues under a make good provision incorporated in the definition of emissions number. Section 142 would require any unit shortfall in one eligible financial year to be included in the calculation of

[110] CPRS Bill s 133.

emissions number in the next compliance year. From a commodification perspective, the make good loses its environmental significance because it further disconnects the obligation to surrender EEUs from current emissions and reductions performance, reflecting instead the intertemporal and fungible nature of EEUs.

None of these shortfall and make-good provisions applies to a non-liable entity.

B. Civil liability penalties

Both the NGER Act and the CPRS Bill prescribe civil liability penalties for breaches by liable entities of obligations arising under the Acts and regulations. Both the NGER Act and the CPRS Bill duplicate this liability for the chief executive officer (*CEO*) of the liable entity.

For example, under the NGER Act, failure to register and failure to report attract a maximum fine for the corporation, as well as the CEO, of $220 000 (2 000 penalty units). The CPRS Bill provides that the maximum fine for breaching a civil liability provision would be $1 100 000 (10 000 penalty units) for corporations and $220 000 for all others. Further, a breach of an obligation would be considered a daily continuing contravention until remedied.[111] The daily penalty under NGER Act is a maximum fine of $11 000 (100 penalty units) and the daily penalty under the CPRS Bill would be five per cent of the maximum pecuniary penalty that could have been imposed for the contravention.

In determining the pecuniary penalty under the CPRS, s 327(3) provides that the Court should have regard to all relevant matters, including:

> (a) the nature and extent of the contravention; and
> (b) the nature and extent of any loss or damage suffered as a result of the contravention; and
> (c) the circumstances in which the contravention took place; and
> (d) whether the person has previously been found by a court in proceedings to have engaged in any similar conduct; and
> (e) the extent to which the person has co-operated with the authorities; and
> (f) if the person is a body corporate:
> (i) the level of the employees, officers or agents of the body corporate involved in the contravention; and
> (ii) whether the body corporate exercised due diligence to avoid the contravention; and

[111] NGER Act, s 30, CPRS Bill, s 338.

(iii) whether the body corporate had a corporate culture conducive to compliance.

The threat of penalty is designed to bear upon the behaviour of the liable entity, and also upon its CEO. This is because

> Effective enforcement arrangements will be vital to achieving the objectives of the Scheme. Non-compliance with obligations … could bring the Scheme into disrepute and undermine its environmental integrity.[112]

None of these penalty provisions apply to a non-liable entity. The CPRS Bill does make provision for penalties in relation to the Registry, and Registry accounts, that could apply to non-liable entities.

Section 160 of the CPRS Bill provides for imprisonment for up to seven years and/or a civil penalty up to $220 000 (2 000 penalty units) for the making of a false entry in the Registry.

Section 164 of the CPRS Bill also would provide for the making of regulations about the Registry, which could expand upon the Registry account requirements discussed in s 2.1, and which could apply to non-liable entities. Section 164 provides:

> (1) The regulations may make further provision in relation to the Registry.
> (2) Regulations made for the purposes of s (1) may make provision requiring the holder of a Registry account to notify a matter to the Authority.
> (3) Subsection (2) does not limit s (1).
>
> *Requirement*
>
> (4) If the holder of a Registry account is subject to a requirement under regulations made for the purposes of s (1) or (2), the holder must comply with that requirement.
>
> *Ancillary contraventions*
>
> (5) A person must not:
> (a) aid, abet, counsel or procure a contravention of s (4); or
> (b) induce, whether by threats or promises or otherwise, a contravention of s (4); or
> (c) be in any way, directly or indirectly, knowingly concerned in, or party to, a contravention of s (4); or
> (d) conspire with others to effect a contravention of s (4).
>
> *Civil penalty provisions*
>
> (6) Subsections (4) and (5) are *civil penalty provisions*.

Proposed regulation 7.6 of the CPRS draft regulations provided that a registered holder of a Registry account 'must not gain, or try to gain, unauthorised access to the Registry'

[112] DCC, White Paper, above n 8, 7-41.

and 'must not initiate a Registry transaction in relation to an emissions unit that the registered holder knows, or ought reasonably to know, has been incorrectly transferred to the registered holder's account.' Notably, these provisions would not apply to persons who does not hold a Registry account, but nonetheless, when enacted, they would apply to non-liable entities that were the holder of a Registry account. The commentary released by DCC in relation to these CPRS draft regulations noted:

> 84. Clause 164 of the Bill makes provision for civil penalties where an account holder breaches a requirement in regulations.
>
> 85 In order to promote registry security and discourage misuse of emissions units, it is proposed to apply civil penalties to account holders in the following circumstances: where an account holder gains, or tries to gain, unauthorised access to the Registry, the Registry's server, or any other server, computer or database related to the Registry; where an account holder damages or corrupts, or tries to damage or corrupt, any software or data related to the Registry; and where an account holder requests the Authority to transfer to another Registry account, or to a foreign account, an emissions unit that the registered holder knows, or ought reasonably to know, has been incorrectly transferred to the account holder's account.
>
> 86 The Bill provides for civil penalties ranging from 500 to 10,000 penalty units (the equivalent of \$5,500 to \$1,100,000), depending on a range of factors including the nature and extent of the contravention: clause 327.
>
> 87 The civil penalties in regulation 7.6 supplement clause 160 of the Bill, which provides that a person commits an offence if that person knowingly makes a false entry in the Registry, or knowingly causes or concurs in the making of a false entry in the Registry. This offence is punishable by a penalty of up to 7 years' imprisonment or 2,000 penalty units (\$22,000).

Notably, these provisions are a precedent for aligning the obligations and liability of non-liable entities under the CPRS Bill with ownership of AEUs, as proposed by the synchronisation rule in this thesis.

2.4. Enforcement provisions

A credible and robust Scheme will depend on strong monitoring, reporting, audit and compliance provisions[113]

DCC stated that:

> the rapid development of a stable, well-informed and efficient carbon market, which is appropriately monitored and regulated to guard against market manipulation, will allow the Scheme to achieve

[113] Ibid 7-1.

> emissions reductions in a cost-effective way.[114]

Nevertheless no market integrity regime was proposed in the CPRS Bill.

Professor Ross Garnaut and the Australian Government recognised that enforcement of the CPRS Bill provisions would underpin the success of the ETS. The Garnaut Review concluded that 'there will be no success in mitigation, at a national or international level, without good governance in relation to climate change policies'[115] 'encompassing correction of market failures in response to prices being placed on emissions as well as to the emissions prices themselves.'[116] The White Paper echoed the findings of the Garnaut Review, and ergo, its fiat for clear action 'to redress ... market failure.'[117] It acknowledged that the CPRS Bill and 'the cap will achieve the desired environmental objectives only if it is enforced. This means that entities responsible for emissions covered by the Scheme must monitor and report their emissions and report to the Government. Non-compliance[118] will attract a penalty.'[119]

The NGER Act and CPRS Bill together would vest ACCRA with significant inquiry and enforcement powers, however, these would be limited only to liable entities.

A. Information gathering and enquiry powers

For emitters reporting over 125 000t CO_2-e, the report submitted to the Greenhouse Energy Data Officer (GEDO) must be audited by an independent third party auditor. GEDO is separately empowered, if there are reasonable grounds for suspecting that a registered corporation has contravened, is contravening or will contravene the NGER Act or Reporting Regulations, to require the corporation to appoint an external auditor to carry out an external audit on one or more aspects of the corporation's compliance.[120]

Officers of GEDO are empowered, and officers of ACCRA would be empowered, to ask questions of an occupier and have any document produced if requested.[121]

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[114] Ibid 7-49.
[115] Garnaut, above n 3, xxix.
[116] Ibid 289; Garnaut suggested (at 311) that other 'regulatory approaches, carbon taxes, hybrid schemes and baseline and credit schemes would not ... provide Australia with lower-cost mitigation opportunities:'
[117] DCC, White Paper, above n 8, xxiv.
[118] It is 'a characteristic of legal instruments ... that individuals or organisations can be compelled by government to comply with prescribed behaviour under penalty of sanctions' Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics* (Edward Elgar, 2000), 223.
[119] DCC, White Paper, above n 8, xxvii.
[120] NGER Act s 73.
[121] Ibid s 61; CPRS Bill pt 17 and pt 19, sub-div B.

Generally, the right not to answer or produce a document, on the grounds of self-incrimination, is annihilated by the legislation. However, s 377 of the CPRS Bill would specifically preserve claims for legal professional privilege.

B. GHG emissions monitoring powers

The NGER Act and CPRS Bill both provide the regulator with extensive powers of entry and monitoring of facilities.[122]

GEDO may appoint 'authorised officers' and ACCRA may appoint 'inspectors.' These officers, properly identified, may:

- enter premises (with the consent of the occupier or under warrant) for the purposes of determining whether the Acts have been complied with;
- search the premises for anything that relates to compliance;
- examine any activity on the premises that relates to compliance;
- take photographs and videos;
- inspect documents that may relate to information provided for the purposes of the Acts;
- secure any things until a warrant is obtained to seize the thing;
- operate equipment at premises to see whether the equipment contains information relevant to assessing the correctness of information provided under the Acts; and
- operate facilities at the premises to put information into documentary form, or remove storage devices.

Limited safeguards for occupiers are in-built in the NGER Act (and CPRS Bill), such as a requirement for informing them that they may refuse consent, and providing that only voluntary consent is effective. The occupiers' consent may limit the entry to a particular period, and require authorised officers and inspectors to leave if consent is withdrawn. Generally, officers must announce themselves before they enter under a warrant, carry the warrant with them and show it to the occupier and explain the rights and duties of the occupier in relation to the warrant.

[122] NGER Act pt 6, div 4; CPRS Bill pt 19.

C. Publication of information

Unlike other Commonwealth laws that enshrine secrecy (for example, by prohibiting the divulging of information[123]) it is intended that the CPRS would be fully transparent.

However, this transparency would only illuminate the activities of liable entities.

Part 12 of the CPRS Bill would require ACCRA to enter the following details about liable entities and eligible emissions units into an electronic, web-based information database (to be called the *Liable Entities Public Information Database* (*LEPID*)):

- the name of an entity that is a liable entity;[124]
- the name of an entity that is likely to be a liable entity;[125]
- the emissions number of each liable entity for the eligible financial year (to be entered as soon as practicable after reporting under the NGER Act, or an assessment is made by ACCRA);[126]
- an estimate of any unit shortfall, and potential penalty (including details of an assessment of unit shortfall);[127]
- the amount of unpaid penalty;[128]
- the number and breakdown of eligible emissions units surrendered;[129]
- the number and breakdown of eligible emissions units voluntarily cancelled (by liable and non-liable entities);[130]
- the transfer of Kyoto units to a voluntary cancellation account, and the cancellation of non-Kyoto international units;[131]
- the number of AEUs relinquished under the CPRS (for example, if so ordered) or under the EITE assistance program;[132]

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[123] See for example, s 16 of the *Income Tax Assessment Act 1936* (Cth) (*1936 Tax Act*).
[124] CPRS Bill s 262.
[125] Ibid.
[126] Ibid s 263.
[127] Ibid s 264.
[128] Ibid ss 265, 267B.
[129] Ibid s 266.
[130] Ibid s 267.
[131] Ibid.
[132] Ibid ss 267A, 267C.

- the per unit charges for the issue of AEUs, and the number of AEUs issued, in the latest auction;[133]
- the six monthly average auction price of AEUs (May and November) (disregarding issues of future vintage years);[134]
- the total number of fixed price AEUs issued (to be published as soon as practicable after 15 December (after the vintage year));[135]
- the name of each entity that receives free AEUs, and the total number and vintage of free AEUs issued to that person;[136]
- details by entity and by quarter for each activity that is an EITE activity;[137]
- details of AEUs that are banked or borrowed;[138]
- details of Kyoto units;[139] and
- totals of emissions numbers for all liable entities, and total shortfalls.[140]

Publication of information in LEPID would not extend to non-liable entities, unless ACCRA forms the view, on reasonable grounds, that a non-liable entity is likely to be a liable entity. A pre-requisite for reasonable grounds would include sector coverage, reporting under the NGER Act, and perhaps even a determination to be made by ACCRA to exercise an anti-avoidance power (discussed in s 2.5A).

Financial intermediaries would not be revealed in LEPID.

Further, LEPID would not reveal secondary and derivatives markets information. The transparency of the primary market, liability and emissions profile of liable entities would be juxtaposed with the opaqueness of dealings by financial intermediaries in other markets.

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[133] Ibid s 270.
[134] Ibid s 271.
[135] Ibid s 272.
[136] Ibid ss 273-274.
[137] Ibid.
[138] Ibid s 275.
[139] Ibid s 276.
[140] Ibid s 277.

D. Infringement notices and enforceable undertakings

Consistent with other environmental and planning legislation, the NGER Act provides for the issue by GEDO of infringement notices.[141]

If GEDO has reasonable grounds to believe that a person has contravened a civil penalty provision, within 12 months of the alleged contravention GEDO may issue an infringement notice relating to the alleged contravention.[142]

The simplest analogy is to liken the infringement notice to a speeding fine. If the penalty specified in the notice – which cannot exceed 20 per cent of the maximum penalty – is paid to GEDO within 28 days of the giving of the notice, then GEDO cannot seek to bring proceedings for the alleged contravention. The liability of the person for the alleged contravention is discharged, and the payment of the penalty is not to be taken as an admission by the person of liability for the alleged contravention.

Another administrative alternative would be for GEDO/ACCRA to accept an undertaking in relation to a contravention or possible contravention.[143] For example, s 45 of NGER Act provides:

> The Greenhouse and Energy Data Officer may accept any of the following undertakings given by a person:
>
> (a) a written undertaking that the person will take specified action, in order to comply with the provisions of this Act or the regulations;
>
> (b) a written undertaking that the person will refrain from taking specified action in order to comply with the provisions of this Act or the regulations;
>
> (c) a written undertaking that the person will take specified action directed towards ensuring that the person:
>
> (i) does not commit a contravention of this Act or the regulations; or
>
> (ii) is unlikely to commit a contravention of this Act or the regulations;
>
> in the future.

There is no secrecy surrounding entering into such an undertaking, for the regulator is obliged to publish its existence.

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[141] NGER Act pt 5, div 2.
[142] Ibid s 46.
[143] NGER Act pt 5, div 3; CPRS, pt 23.

Whilst an enforceable undertaking would provide some protection for an emitter, the regulator may still apply to Court for an order to comply with the undertaking, and may even cancel the undertaking.

None of these provisions would apply to a non-liable entity.

2.5. Other Regulator discretions – CPRS Bill

The CPRS Bill would incorporate an anti-avoidance rule that would empower ACCRA to cancel the benefit of a threshold that might be available to an entity that claims it is not a liable entity under the CPRS Bill (on account of the purported application of such threshold), with the consequence that liability is triggered.[144] Given that the CPRS Bill would operate in a self-assessment manner, the anti-avoidance rule is the only mechanism to extend reach of the CPRS Bill to non-liable entities.

Conduct of economic agents in relation to dealings with AEUs may fall within Chapter 7 of the Corporations Act and be prescribed by the *Corporations Regulations 2001* (Cth) (*Corporations Regulations*) (discussed in s 2.6). It was proposed the Corporations Regulations would be amended by regulations fashioned upon exposure drafts released on 2 October 2009 and 30 October 2009 of *Corporations Amendment Regulations 2009* and 30 October 2009 of *Australian Securities and Investments Commission Amendment Regulations*.[145] Further, conduct in auctions for AEUs may be prescribed.[146]

This thesis asserts that these rules fall short of a synchronisation rule or the ideal market integrity regime.

A. Anti-avoidance rules

The CPRS Bill foreshadows an anti-avoidance rule, applying to any arrangement or scheme after 15 December 2008.[147]

Under the anti-avoidance provisions, ACCRA would be empowered to make a determination to cancel the benefit of an emissions threshold in relation to a facility

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[144] CPRS Bill ss 23, 30.
[145] Exposure drafts released styled as *Corporations Amendment Regulations 2009 (No.)* and *Australian Securities and Investments Commission Amendment Regulations 2009 (No.).*
[146] DCC, White Paper, above n 8, chs 9.4, 16.4.
[147] CPRS Bill ss 23, 30.

(being the threshold for exemption from liability under the CPRS Bill, 25 000t CO_2-e scope 1 emissions for direct (non-landfill) emitters).

ACCRA must publish a copy of the determination on its website.

Although these anti-avoidance provisions potentially apply to non-liable entities, they would not extend to any non-liable entity that operates in a sector not covered by the CPRS, for example, financial intermediaries.

The power to make the determination would arise when:

> (a) at any time after 15 December 2008, one or more persons entered into, commenced to carry out, or carried out, a scheme; and
>
> (b) in the Authority's opinion, the person, or any of the persons, who entered into, commenced to carry out, or carried out, the scheme did so for the purpose, or for purposes that included the substantial purpose, of:
>
> > (i) enabling the controlling corporation of a group to obtain the benefit of one or more threshold provisions in relation to a facility for an eligible financial year; or
> >
> > (ii) enabling a non-group entity to obtain the benefit of one or more threshold provisions in relation to a facility for an eligible financial year; or
> >
> > (iii) enabling the holder of a liability transfer certificate to obtain the benefit of one or more threshold provisions in relation to a facility for an eligible financial year.[148]

'Scheme' is very broadly defined, and may include a scheme within a scheme.[149] Section 23 makes it immaterial whether the controlling corporation, non-group entity or the holder of a liability transfer certificate (LTC) is the person, or one of the persons, who participated in the scheme.[150]

The purpose of the scheme (or, if there are multiple purposes of a scheme, the substantial purpose of the scheme) must be to obtain the benefit of the threshold. A singular or substantial purpose implies a purpose more than a dominant or incidental purpose. The avoidance test therefore is narrow. However, in contrast to s 177D of the anti-avoidance provisions of Part IVA of the *Income Tax Assessment Act 1936* (Cth)

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[148] Ibid s 23(1).

[149] Ibid s 5. cf *Federal Commissioner of Taxation v Hart* (2004) 217 CLR 216; *Federal Commissioner of Taxation v Peabody* (1994) 181 CLR 359.

[150] Cf *Federal Commissioner of Taxation v Consolidated Press Holdings Limited* (2001) 207 CLR 235.

(*1936 Tax Act*), the power of ACCRA to make the threshold cancellation determination would be unfettered, subject only to taking into account irrelevant considerations and failing to take into account relevant considerations.[151] If, similarly to Part IVA, Courts were to decide that the s 23 purpose should be objectively determined[152] (which means that subjective intention and statements of intention would not be wholly conclusive of purpose, and that purpose of a professional advisor, for example, may be attributed), any conduct that results in any entity actually reducing emissions would be potentially within the scope of ACCRA's determination powers, if the emissions reduction would reduce total emissions below the threshold of 25 000t CO_2-e, and notwithstanding any other commercial character of such a plan (for example, the introduction of a new technology, or a reduction in machinery working hours).

Such a wide remit for s 23 may be read down by a Court. For example, in *Protean (Holdings) Ltd v Environment Protection Agency* [1977] VR 51, Gillard J said of the unfettered discretion of the Victorian Environment Protection Agency (*EPA*) under the *Environment Protection Act 1970* (Vic) to issue a licence to discharge waste to air:

> Although it may be readily conceded that the purposes and objects of this Act are praiseworthy, the means adopted to achieve them seem to be quite authoritarian, if not draconian in character. The penalties are harsh …. Because of these features, I am of the opinion that the legislature must be taken to have intended that although the statutory provisions of this Act might appear to confer powers upon the subordinate bodies, which would enable them to invade or erode the existing rights and privileges of the individual, either of a personal or proprietary character, such provisions if at all ambiguous should be strictly construed in favour of the subject.[153]

Public interest theory (see chapter six) justifies the anti-avoidance provisions of ss 23 and 30 – to protect the integrity of the CPRS Bill threshold, to promote the objects of the CPRS Bill, to protect the Australian Government revenue, and to ensure a level playing field in the market. By ensuring that the liability under the CPRS Bill is not manipulated (avoided), ACCRA would act in the public interest. Yet, despite the apparent breadth of these anti-avoidance provisions, they are not focused on conduct of non-liable entities in relation to dealings with AEUs. Self-evidently, the operation of

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[151] *Federal Commissioner of Taxation v Consolidated Press Holdings Limited* (2001) 207 CLR 235; *Federal Commissioner of Taxation v Hart* (2004) 217 CLR 216; *Federal Commissioner of Taxation v Peabody* (1994) 181 CLR 359; *Federal Commissioner of Taxation v Spotless Services Limited* (1996) 186 CLR 404.
[152] Ibid.
[153] *Protean (Holdings) Ltd v Environment Protection Authority* [1977] VR 51, 55.

both s 23 and s 30 must be subject to the existing coverage of the CPRS. This means that a non-liable entity in a sector not covered by the CPRS cannot be brought within the CPRS Bill by mere exercise of an anti-avoidance determination under either s 23 or s 30. Financial intermediaries outside covered sectors, for example, within the banking and finance sector, cannot be made liable entities. Chapter six in this thesis demonstrates that the public interest justifies the extension of liability through the synchronisation rule and enhanced market integrity rules proposed by this thesis.

B. Anti-monopoly rules

There is no rule in the CPRS Bill preventing monopoly conduct in AEUs.

Generally, anti-competitive conduct in Australia is addressed by the *Competition and Consumer Act 2010* (Cth) (*C&C Act*) (formerly the *Trade Practices Act 1974* (Cth)).

In chapter 8.5 of the White Paper, 'Competitive market free of manipulation,' DCC broadly canvassed concerns of market manipulation and anti-competitive behaviour in relation to AEUs and the role of financial intermediaries in the ETS. As noted at chapter 8.5.1 of the White Paper:

> Permits, like other financial products, could also be the subject of market misconduct, including market manipulation and insider trading. Market manipulation includes manipulation of the auction process (for example, through collusion) and of prices in the secondary market. There is also the possibility of cornering the market for permits close to the time for surrender.[154]

DCC acknowledged the risk of market manipulation, but concluded that 'there is no particular reason to believe that financial intermediaries will be more likely to manipulate the market than other participants'[155] and 'the best protection against manipulative behaviour will come from broad participation in the Scheme, which will result in many buyers and sellers in the market.'[156] However, in the wake of the GFC and bearing in mind the lessons learned from carbon markets (discussed in chapter four) this statement requires revision.

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[154] DCC, White Paper, above n 8, 8-23.
[155] Ibid.
[156] Ibid.

Clearly, participation in the market and liability under the CPRS Bill are not the same concept.[157]

It is proposed that auction regulations would limit the maximum parcel of AEUs that can be purchased by any one bidder in any one auction. The White Paper foreshadowed the design rule for auctions capping the amount of AEUs in any auction available for any one bidder to 25 per cent of all AEUs offered in that auction round:

> Bidders will be restricted to parcel sizes of no more than 25 per cent of the total number of permits sold at each auction. As there are to be 16 auctions, … this implies bids of no larger than around 1.6 per cent of total permits issued for a given vintage. The advantage of imposing a maximum parcel size is that it reduces the potential for large entities to monopolize the market for permits – which stakeholders raised as an important concern. The trade-off is that this is likely to inhibit the flexibility of the market. However, around 1.6 per cent should be sufficient, given that the largest single entity is estimated to account for around 3.5 per cent of total emissions. This would mean that the largest entity could buy all its requirements at just three auctions.[158]

ACCRA proposed to hold up to 16 auctions of vintage AEUs for the current eligible financial year – 12 auctions would be held in the current eligible financial year, and one auction would be held before the 15 December surrender deadline. ACCRA also proposed to hold one annual auction of forward vintages (limited to the next three vintage years). During consultation, some stakeholders were concerned that greater auction frequency might delay the development of the secondary market,[159] but in paragraph 9.5 of the White Paper, DCC argued for allocative efficiency and efficient price discovery when considering auction design. For example, DCC suggested that 'a well-designed auction' would include:

> - a large competitive field of bidders
> - a simple system that encourages participation
> - a stable set of auction rules that are not subject to arbitrary or unpredictable changes
> - transparent processes that rapidly reveal price information
> - minimal fees, charges and other costs of participation (although

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[157] As noted, save for the requirement to hold a Registry account, there will be no restriction on who may participate at auctions or buy AEUs or on the issue or transfer of an AEU: CPRS Bill ss 87(3), 95. DCC, White Paper, above n 8, 7-46.

[158] Ibid 9-29.

[159] For example, Origin Energy submitted that 'holding auctions too frequently could potentially hinder the pace of secondary market development' (Origin Energy, Submission No 815 to Department of Climate Change, *Green Paper*, September 2008, 64); and Australian Securities Exchange Ltd (ASX Ltd) submitted that 'quarterly auctions would be sufficient to underpin a robust and regular process of price discovery and avoid the administrative overhead of more frequent auctions' (ASX Ltd, Submission No 811 to Department of Climate Change, *Green Paper*, September 2008, 4).

some rules to ensure that bids are credible will be desirable).[160]

The proposed auction regulations would also require applicants to lodge some form of financial guarantee or cash deposit.[161] This financial security is designed to ensure that bidders would be able to pay for the permits they buy at auction. This is reinforced by s 90(3) of the CPRS Bill which provides that ACCRA would not be able to issue an AEU until payment is made in any event. If the aim of s 90(3) and the auction regulations is to encourage only genuine participants, all they achieve is creditworthiness for participation. Further, the ultimate financial risk for participants in auctions would be somewhat diminished by a proposal to include a standard auction feature that allows, depending on the number of AEUs a bidder acquires and the price at which they are acquired, either the deposit to be returned or the bidder's payment to be reduced.[162]

In the consultation following the release of the Green Paper, two stakeholders opposed the proposal for universal participation, raising concerns that the participation of non-liable entities in auctions would result in speculation and the bidding up of prices.[163]

Certainly, it would be the case that the acquisition of AEUs by non-liable entities would result in those AEUs not being immediately available for surrender by liable entities: they would be held by non-liable entities either for resale or for cancellation. As noted in s 1.7, such a reduced supply of AEUs may result in the price for AEUs rising in the face of demand (since price is a function of both quantity and demand).[164]

It is self-evident that the rules applicable to bidding in an auction do not apply to buying AEUs on or off market.

The C&C Act makes provision for monopolistic and market-making conduct, but does not directly deal with speculation, except perhaps in the extreme situation associated with an attempt at cornering the market by a dominant participant. For example, s 45(2) of the C&C Act provides that a corporation shall not make a contract or arrangement, or arrive at an understanding, if a provision of the proposed contract, arrangement or understanding has the purpose, or would have or be likely to have the effect, of

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[160] DCC, White Paper, above n 8, 9-7.
[161] Ibid 9-22.
[162] Ibid.
[163] Australian Food and Grocery Council, Submission No 0831 to Department of Change Climate, *Green Paper*, September 2008; Woodside Energy Ltd, Submission No 0485 to Department of Climate Change, *Green Paper,* September 2008.
[164] See, eg, Garnaut, above n 3, 323 (design Principle 1 'Scarcity').

substantially lessening competition. Speculative activity by financial intermediaries and others may increase competition for AEUs and therefore may be outside the reach of s 45. Subsection 46(1) of the C&C Act provides that if a corporation has a substantial degree of market power it shall not take advantage of that power in that or any other market for the purpose of:

- eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market; or
- preventing the entry of a person into that or any other market; or
- deterring or preventing a person from engaging in competitive conduct in that or any other market.

Aside from the obvious limitations that s 46 (as is the case for s 45) only applies to corporations and is limited to uses of substantial degrees of market power already possessed, proving that buying and banking AEUs or trading in them is tainted with the prohibited purpose would be problematic, because those activities would be ordinary features of the ETS.

C. Anti-abuse rules

In the CPRS Bill there is no anti-abuse rule protecting the AEU market (save for powers of enforcement within the CPRS (discussed in s 2.4)).

A cap-and-trade ETS is predicated on the fact that rights to emit may be transferred between economic agents. Hence, as mentioned above, save for the requirement for a transferee to hold a Registry account, there is no proposed fetter within the CPRS Bill on the ownership of an AEU. Whilst the CPRS Bill would create the AEU and its properties, it is noteworthy that the CPRS Bill would not create the market for AEUs. But this does not mean that the CPRS Bill cannot incorporate provisions promoting market maintenance and protecting the market from abuse.

2.6. Market protections – *Corporations Act 2001* (Cth)

Following the GFC, and as a regulatory response to observed market behaviour, the Corporations Act was amended by the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth). Amendments were proposed also to the Corporations Regulations (fashioned as 2 October 2009 and 30 October 2009 exposure drafts of *Corporations Amendment Regulations*). Together, the amendments attempt some market protection that would extend to carbon markets. It is to these limited market integrity rules that the chapter now turns. This thesis asserts that these provisions need further strengthening by the introduction of a synchronisation rule into the CPRS Bill and an enhanced carbon market integrity regime.

Chapter 7 of the Corporations Act is a code for regulation of Australian financial services and markets. Regulatory oversight of the Corporations Act is vested in the *Australian Securities and Investments Commission* (*ASIC*), which is empowered (inter alia) to investigate and prosecute. The main object of chapter 7 is to promote:

> (a) confident and informed decision making by consumers of financial products and services while facilitating efficiency, flexibility and innovation in the provision of those products and services; and
>
> (b) fairness, honesty and professionalism by those who provide financial services; and
>
> (c) fair, orderly and transparent markets for financial products; and
>
> (d) the reduction of systemic risk and the provision of fair and effective services by clearing and settlement facilities.[165]

A 'financial product' is defined in s 761CA to have the meaning given by Division 3 of Chapter 7. Section 763A of Division 3 provides:

> (1) For the purposes of this Chapter, a financial product is a facility through which, or through the acquisition of which, a person does one or more of the following:
> (a) makes a financial investment (see s 763B);
> (b) manages financial risk (see s 763C);
> (c) makes non-cash payments (see s 763D).
>
> This has effect subject to s 763E.
>
> (2) For the purposes of this Chapter, a particular facility that is of a kind through which people commonly make financial investments, manage financial risks or make non-cash payments is a financial product even if that facility is acquired by a particular person for some other purpose.
>
> (3) A facility does not cease to be a financial product merely because:
> (a) the facility has been acquired by a person other than the person to whom it was originally issued; and
> (b) that person, in acquiring the product, was not making a financial investment or managing a financial risk.

Following the White Paper, an eligible emissions unit would be promulgated as a 'financial product'[166] for the purposes of Chapter 7 of the Corporations Act.

[165] Corporations Act s 760A.

In the Carbon Pollution Reduction Scheme (Consequential Amendments) Bill 2010 (Cth) (*CPRS (Consequential Amendments) Bill*) that accompanied the CPRS Bill, it was proposed that Division 3 of Chapter 7.1 would provide that an AEU and an IEU be specifically included in the definition of financial products.[167]

However, the existing and proposed provisions of the Corporations Act and Corporations Regulations do not neatly fit an Australian carbon market. For the reasons discussed below, their application to the Australian carbon markets is problematic. Indeed, in the April 2009 issues paper, 'Eligible emissions units as financial products,'[168] DCC highlighted the tension in issues requiring resolution and adjustments to these regimes to match the characteristics of AEUs but yet 'not involve unnecessary compliance costs.'[169]

A. *Financial services*

Section 766A of the Corporations Act provides:

> (1) For the purposes of this Chapter, subject to paragraph (2)(b), a person provides a ***financial service*** if they:
> (a) provide financial product advice (see s 766B); or
> (b) deal in a financial product (see s 766C); or
> (c) make a market for a financial product (see s 766D); or
> (d) operate a registered scheme; or
> (e) provide a custodial or depository service (see s 766E); or
> (f) engage in conduct of a kind prescribed by regulations made for the purposes of this paragraph.

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166 One alternative to treating AEUs as financial products would be to treat them as commodities. Environmental products are traded as commodities. Generally, chapter 7 of the Corporations Act does not apply to commodities and commodity derivatives. For example, Australia does not have short-selling restrictions in respect of other commodities (for instance gold, silver, wheat, oil). It is perhaps too early to gauge whether traders will be relatively uninterested in AEUs compared to derivatives: the depth of the Australian market and hence its liquidity is expected, at least initially, to be set by financial intermediaries who will purchase AEUs other than for surrender. In a submission to the DCC, the Australian Bankers Association argued that no case has been made out for the carbon market to be specially treated:

> The carbon market should be established to function and operate similar to other Over-The-Counter (OTC) markets with standardisation of contract documentation and widely accepted market conventions to facilitate emissions trading.

Australian Bankers Association, Submission No 1036 to the Department of Climate Change, *Green Paper*, 10 September 2008, 6).

167 CPRS (Consequential Amendments) Bill s 6. Proposed new Corporations Act ss 764A(1)(l), (la).

168 Department of Climate Change Australian Government, 'Carbon Pollution Reduction Scheme: Eligible Emissions Units as Financial Products' (Issues Paper, Australian Government, Department of Climate Change, April 2009).

169 Ibid 4.

Section 911A of the Corporations Act provides that a person who carries on a financial services business in Australia must hold an Australian financial services licence covering the provision of the financial services (as defined), unless exempted under Corporations Act s 911A(2) or regulations made pursuant to s 911A(2)(k). DCC fully expected that services provided in relation to AEUs (including the provision of trading advice, brokerage services, trading platforms and support services, and derivatives over AEUs)[170] would require a financial services licence.

Section 766C of the Corporations Act defines 'dealing:'

> (1) For the purposes of this Chapter, the following conduct (whether engaged in as principal or agent) constitutes ***dealing*** in a financial product:
>
> (a) applying for or acquiring a financial product;
>
> (b) issuing a financial product;
>
> (c) …;
>
> (d) varying a financial product;
>
> (e) disposing of a financial product.
>
> (2) Arranging for a person to engage in conduct referred to in s (1) is also ***dealing*** in a financial product, unless the actions concerned amount to providing financial product advice.
>
> (3) A person is taken not to ***deal*** in a financial product if the person deals in the product on their own behalf (whether directly or through an agent or other representative) …

Subsection 766C(3) is a most important provision. Acquiring and disposing of AEUs by a financial intermediary, for example, would not amount to a dealing, and therefore a financial service, provided that the financial intermediary trades on its own account (i.e. for its own profit, even if the trades are conducted by a broker). Proposed regulation 7.1.35C would modify s 766C(3) to ensure that a financial service would not be provided if a body corporate related to or associated with a liable entity deals in AEUs or IEUs on behalf of the liable entity.

Section 761D of the Corporations Act currently defines a 'derivative' for the purposes of chapter 7:

> **Meaning of derivative**
>
> (1) For the purposes of this Chapter, subject to subsections (2), (3) and (4), a ***derivative*** is an arrangement in relation to which the following conditions are satisfied:

[170] DCC, White Paper, above n 8, 8-23.

(a) under the arrangement, a party to the arrangement must, or may be required to, provide at some future time consideration of a particular kind or kinds to someone; and
(b) that future time is not less than the number of days, prescribed by regulations made for the purposes of this paragraph, after the day on which the arrangement is entered into; and
(c) the amount of the consideration, or the value of the arrangement, is ultimately determined, derived from or varies by reference to (wholly or in part) the value or amount of something else (of any nature whatsoever and whether or not deliverable), including, for example, one or more of the following:
   (i) an asset;
   (ii) a rate (including an interest rate or exchange rate);
   (iii) an index;
   (iv) a commodity.

(2) Without limiting s (1), anything declared by the regulations to be a derivative for the purposes of this section is a derivative for the purposes of this Chapter. A thing so declared is a derivative despite anything in subsections (3) and (4).

(3) Subject to s (2), the following are not derivatives for the purposes of this Chapter even if they are covered by the definition in s (1):
(a) an arrangement in relation to which subparagraphs (i), (ii) and (iii) are satisfied:
   (i) a party has, or may have, an obligation to buy, and another party has, or may have, an obligation to sell, tangible property (other than Australian or foreign currency) at a price and on a date in the future; and
   (ii) the arrangement does not permit the seller's obligations to be wholly settled by cash, or by set-off between the parties, rather than by delivery of the property; and
   (iii) neither usual market practice, nor the rules of a licensed market or a licensed CS facility, permits the seller's obligations to be closed out by the matching up of the arrangement with another arrangement of the same kind under which the seller has offsetting obligations to buy;

   but only to the extent that the arrangement deals with that purchase and sale; a contract for the future provision of services;

(b) a contract for the future provision of services;
(c) anything that is covered by a paragraph of s 764A(1), other than paragraph (c) of that sub-section;
(d) anything declared by the regulations not to be a derivative for the purposes of this Chapter.

(4) Subject to sub-section (2), an arrangement under which one party has an obligation to buy, and the other has an obligation to sell, property is not a derivative for the purposes of this Chapter merely because the arrangement provides for the consideration to be varied by reference to a general inflation index such as the Consumer Price Index.

Despite this wide definition of derivative, it is possible that financial intermediaries may seek to structure derivatives contracts to attract the exemption in s 761D(3)(a).

Because s 129(1) of the CPRS Bill would provide that only the registered holder of an AEU may surrender the AEU to ACCRA the delivery of AEUs in settlement would most often actually be preferred, in lieu of any cash payment or offset. So structured, these products would not be derivatives as defined, and hence not a financial product.

Notwithstanding the potential that entities that provide advice in respect to AEUs and entities that deal in them would need to hold an Australian financial services licence, if a person is merely bidding in auctions, then the requirement for a licence would be exempted. A proposed new regulation 7.6.02Al(2A) would provide:

> A person is exempt from the requirement to hold an Australian financial services licence for a financial service in the following circumstances:
>
> (a) the financial service is an ascending clock auction of Australian emissions units to which s 103 of the *Carbon Pollution Reduction Scheme Act …* applies;
>
> (b) the person's participation in the financial service consists of bidding in the auction:
>
> (i) on the person's own behalf; or
>
> (ii) on behalf of a related body corporate of the person; or
>
> (iii) on behalf of an associated entity of the person.

Because derivatives over AEUs would be financial products, entities that trade futures and options over AEUs in the financial markets on behalf of clients would have to hold an Australian financial services licence. The Chapter 7 provisions of the Corporations Act that apply when dealing with retail clients impose considerably more onerous obligations than dealing only with wholesale clients, which may ultimately result in these types of services being limited to wholesale clients. If an entity was acting only on its own behalf, although acting as a counter-party and/or banker and/or insurer for such trades, it is not so clear whether the entity would require an Australian financial services licence.

A proposed new regulation 7.6.01 of the Corporations Regulations (foreshadowed in the 30 October 2009 exposure draft of *Corporations Amendment Regulations*) would provide that for s 911A(2)(k) of the Corporations Act, the provision of the following services would be covered by an exemption from the requirement to hold an Australian financial services licence:

> (ma) a financial service provided by a person in the following circumstances:

(i) the service consists only of either or both of:

(A) dealing in derivatives over eligible emissions units (within the meaning of the *Carbon Pollution Reduction Scheme Act …*); and

(B) dealing in eligible emissions units (within the meaning of that Act);

(ii) the service does not involve the making of a market for those derivatives or eligible emissions units;

(iii) the dealing is entered into for the purpose of managing the risk of adverse variations in the cost of eligible emissions units that are expected to be surrendered to the Australian Climate Change Regulatory Authority, under the Carbon Pollution Reduction *Scheme Act …*, by:

(A) the person; or

(B) a related body corporate of the person; or

(C) an associated entity of the person; and

(iv) the person does not deal in those derivatives or eligible emissions units as the principal purpose of the person's business;

(v) the dealing is entered into:

(A) on the person's own behalf; or

(B) on behalf of a related body corporate of the person; or

(C) on behalf of an associated entity of the person;

Proposed regulation 7.6.01 of the Corporations Regulations would sanction the operation of commodity trading desks of liable entities (and their related and associated entities) without a financial services licence, provided that the market dealings do not make a market for the AEUs, IEUs or derivatives, and the purpose of trading is to manage price risks in eligible emissions units expected to be surrendered to ACCRA. A new regulation 7.1.08A(3) of the Corporations Regulations would provide that the sale by a person of a free AEU issued to that person by ACCRA would not be taken to be making a market.

The new Corporations Regulations would capture only those entities that, because of their activities, would ordinarily possess an Australian financial services licence, for example, because they are market-makers or commodity traders. Financial intermediaries, on the other hand, may not require a licence at all. Behaviour of entities of course may only be marginally influenced by whether or not the entity holds an Australian financial services licence – the CPRS Bill and the regulations would not link the Corporations Act requirements into the application process for a Registry account.

Notwithstanding that eligible emissions units would be financial products, other foreshadowed modifications to the operation of Chapter 7 of the Corporations Act would exclude ACCRA from having to issue a product disclosure statement in respect of the issue of AEUs.

B. Short selling

A proposed new regulation 7.9.99 of the Corporations Regulations (fashioned on the 2 October 2009 exposure draft of *Corporations Amendment Regulations*) would effectively ban forward trading in AEUs in Australia.

If these Corporations Act and Corporations Regulations proposals proceed, Bateman (2009) suggests they would only increase the cost of compliance for little or no benefit, and drive international traders and investors to other offshore markets, reducing the number of traders and the liquidity of the Australian markets and thereby making the Australian market more, rather than less, open to manipulation.[171] Bateman suggests that Australia would be the only jurisdiction in the world to have short-selling and inside information regulation of emissions markets. In chapter seven this thesis will contrast these provisions with the market integrity regime proposed in the EU and the US (and posited by this thesis).

Section 1020B of the Corporations Act deals with short-selling of certain securities and financial products ('s 1020B products'). Under s 1020B(2), a person must only sell s 1020B products if at the time of the sale (which includes the time of the offer to sell) the seller has a presently exercisable and unconditional right to vest the products in the buyer. Essentially, the provisions would ban 'naked short-selling,' because the seller must already own the products (or own them subject only to payment and/or transfer conditions).

Under the Corporations Regulations draft amendments (fashioned on the 30 October 2009 exposure draft of *Corporations Amendment Regulations*) eligible emissions units (that is, AEUs and IEUs such as CERs and ERUs) would be added to the list of s 1020B products, by adding an additional paragraph to the list of prescribed financial products in regulation 7.9.80B. Arguably, this rule is a mirror to the requirement for a transferee to already hold a Registry account. The rule would not stop buying and selling EEUs for

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[171] Brendan Bateman, *Australia: Commonwealth plans to put the brakes on forward trading of Australian Emissions Units* (16 November 2009) Clayton Utz, <http://www:.mondaq.com/australia/article.asp?articleid=89318>.

speculation, but it would stop selling (spot sales) eligible emissions units which are not already owned. Nor does the rule stop other derivatives transactions.

If the proposed regulations are implemented as they appear in the draft, the regulations would effectively prevent operators of EITE facilities offering to sell forward AEUs based upon their free emission allocations, until those allocations are actually issued by the Australian Government (because their allocation from year to year is conditional on their production from year to year). For similar reason the proposed regulations would also prevent EITEs promising to deliver those free emission allocations in consideration of other services (such as in return for the provision of electric power at a carbon-exclusive price). The proposal would also likely prevent forestry operators from pre-selling AEUs based upon their expectation of earning AEUs from reforestation sequestration activities that voluntarily opt into the CPRS under Part 10. Forestry operators might have expected to raise the funds required for planting forests by pre-selling their anticipated sequestration benefits, but these pre-sales would be prohibited by the proposed restriction, because the entitlement to the AEUs is conditional on achieving the required sequestration.

The short-selling prohibitions would benefit orderly trading in emissions rights, and should operate for emissions rights in tandem with coverage by the C&C Act and other Corporations Act rules against market misconduct and market manipulation. For instance, s 1041C of the Corporations Act outlaws artificial transactions that depress prices in the market. If the CPRS rules inhibit the development of market liquidity, this is likely to be marginal, and limited to an initial start-up period. But if eligible emissions units are already held, these provisions would not prohibit speculative trading at all. Indeed, if short-selling restrictions are introduced, once there is a physical AEU available, the restrictions are likely to be met and overcome by artificial techniques such as the borrowing arrangements that have arisen in the corporate securities market to overcome the short-selling restrictions imposed on corporate securities.[172]

Using a synchronisation rule and developing an enhanced carbon market integrity regime as posited by this thesis would better constrain these types of speculative practices, and therefore lessen the need to formulate in regulation what is and what is

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[172] Australian Securities and Invesment Commission, *Regulatory Guide 196 Short Selling*.

not illegitimate short-selling. For example, with a fair and orderly carbon market, legitimate forward sales by EITEs and forestry operators would be permissible.

The fact that environmental products such as *Renewable Energy Certificates* (*RECs*), CERs and ERUs have been trading in significant volumes in Australia and elsewhere for almost a decade, without academic research uncovering evidence that there are illegitimate gains to be made from illegitimate forward selling, does not provide a reason for not introducing such rules particularly after the GFC. The key distinction between environmental products (and other commodities) and corporate securities is the underlying asset. In respect of corporate securities, the underlying asset (the company, its directors and its business) can be damaged and put under pressure by short-selling. The object embedded in corporate securities is income from and growth of the underlying asset. As economists remind, the object of a trading system in environmental products is to find the least cost abatement, and so the intention is to promote low-cost abatement rather than promote an increase in value of the environmental product. However, it does not follow that a decrease in value of the environmental product (the aim of a short-selling play) would in fact allow greater abatement and greater improvement of the environment at less cost to the community.

C. Off-market transactions

Part 7.9 of the Corporations Act deals with unsolicited offers to purchase financial products off market. A new regulation 7.7.10AI of the Corporations Regulations would modify Corporations Act s 949A(2)(c), so that warnings which must be given in relation to the provision of general advice would operate if the general advice relates to the acquisition of eligible emissions units. The anti-hawking rule would include the warning that the client should obtain the emissions unit statement that ACCRA would make under s 278 of the CPRS Bill before making any decisions to acquire the product.

D. Market misconduct

Part 7.10 of the Corporations Act addresses a range of market misconduct and other prohibited conduct relating to financial products and financial services, including:

- manipulation of the price for trading in financial products on a financial market operated in the jurisdiction (s 1041A);
- engaging in false or misleading appearances of active trading or the price for

trading in financial products (s 1041B);

- engaging in fictitious transactions which result in the price for trading in financial products on a financial market being maintained, inflated or depressed (s 1041C);
- engaging in dishonest conduct in relation to a financial product or financial service (s 1041G);
- civil liability for misleading or deceptive conduct in relation to a financial product or a financial service (s 1041H); and
- insider trading of specified products (Division 3 of Part 7.10).

With eligible emission units classified as financial products for the purposes of Part 7.10 of the Corporations Act, the public interest – the maintenance of fair and orderly markets absent fraud on market participants – is very much the justification for the provisions in Part 7.10 (see chapter six). Failure to comply with these provisions would be an offence and offenders would be liable also to a civil penalty up to A$22 000 or imprisonment up to five years.[173]

The inclusion of provisions such as Part 7.10 into the Corporations Act was a response to observed market behaviour.[174] The review and evolution of Part 7.10 of the Corporations Act continues as a response to market behaviour.[175]

Would the provisions of Part 7.10 overcome informational deficiencies and improve the transparency of an Australian ETS? In the absence of real-time disclosure, market monitoring and threat of regulator intervention, it would be difficult to assess the information that might affect the price of AEUs. Even in a deep and liquid market, information any one entity has may still have a material effect on the price of AEUs. Speculative buying and selling of AEUs by non-liable entities, for example, may not automatically fall within the intended scope of Part 7-10. Indeed, it may be difficult to determine whether improper use has been made of information an individual entity might have or whether other behaviour has occurred which could properly be characterised as misconduct. For example, it has been suggested:

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[173] Corporations Act sub-s 1311(3) and sch 3.

[174] See, eg, The Treasury Australian Government, 'Financial Products, Service Providers and Markets: An Integrated Framework' (Implementing CLERP 6 - Consultation Paper, Australian Government, The Treasury, 3 March 1999).

[175] See, eg, Corporations and Markets Advisory Committee, 'Aspects of Market Integrity: Issues Paper' (February 2009).

> one example [of inside information] might be an emitter having confidential plans to increase (decrease) substantially its emissions-producing activities, and so acquiring (disposing of) a large number of AEUs in circumstances where, had those plans been public knowledge, the price of AEUs would have been materially higher (lower). A policy decision may need to be made as to who should bear the increase (decrease) in the cost of AEUs – the unsuspecting market that is unaware of the confidential project or the proponent of the project (which, by being compelled to disclose the proposal to the market, would bear the impact on prices).[176]

From 1 August 2010, ASIC was empowered with all market supervision. Part 7.10 of the Corporations Act was supplemented with new Subdivision 7.2 providing for market operating rules. The chapter now introduces the market operating rules, which would be further compared in chapter seven to the market integrity rules in the ACES Act/APA, and the legislative amendments recommended by this thesis.

E. Market operating rules

The *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth) introduced a new Subdivision B to Part 7.2 of the Corporations Act. Subsection 793A(1) of Subdivision B provides that the operating rules of a licensed market must deal with the matters prescribed by regulations made for the purposes of that subsection, anticipating regulations for new market integrity rules.

Market integrity rules were promulgated as disallowable legislative instruments for six markets effective 1 August 2010. These were:

- ASIC Market Integrity Rules (ASX Market) 2010;[177]
- ASIC Market Integrity Rules (ASX 24 Market) 2010;[178]
- ASIC Market Integrity Rules (APX Market) 2010;[179]
- ASIC Market Integrity Rules (IMB Market) 2010;[180]
- ASIC Market Integrity Rules (NSXA Market) 2010;[181] and
- ASIC Market Integrity Rules (SIM VSE Market) 2010.[182]

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176 Allens Arthur Robinson, *Focus: Detailed analysis of White Paper: carbon trading* (2009) <http://www.aar.com.au/pubs/cc/focc23jan09.htm>.
177 *ASIC Market Integrity Rules (ASX Market) 2010*, F2010L02211 made 1 August 2010.
178 *ASIC Market Integrity Rules (ASX 24 Market) 2010*, F2010L02212 made 1 August 2010.
179 *ASIC Market Integrity Rules (APX Market) 2010*, F2010L02208 made 1 August 2010.
180 *ASIC Market Integrity Rules (IMB Market) 2010*, F2010L02207 made 1 August 2010.
181 *ASIC Market Integrity Rules (NSXA Market) 2010*, F2010L02209 made 1 August 2010.
182 *ASIC Market Integrity Rules (SIM VSE Market) 2010*, F2010L02210 made 1 August 2010.

The rules deal with the activities or conduct of domestic licensed markets, persons in relation to domestic licensed markets, and persons in relation to financial products traded on domestic licensed markets. Accordingly, they would cover AEUs as financial products.

Section 793B provides that:

> (1) The operating rules (other than listing rules) of a licensed market have effect as a contract under seal:
>
> (a) between the licensee and each participant in the market; and
>
> (b) between a participant and each other participant;
>
> under which each of those persons agrees to observe the operating rules to the extent that they apply to the person and to engage in conduct that the person is required by the operating rules to engage in.
>
> (2) However, if there is an inconsistency between the operating rules of a financial market and the market integrity rules, the market integrity rules prevail to the extent of the inconsistency.
>
> (3) Subsection (2) does not apply in relation to a financial market the operator of which is licensed under s 795B(2) (overseas markets).

Subsection 793B(1) deems the market integrity rules to be a contractual agreement between the market operator, for example, ASX Limited, as the licensed operator of the *Australian Securities Exchange* (*ASX*), and each participant.

<u>Who is a participant?</u>

A 'participant' is defined in s 761A of the Corporations Act, in relation to a financial market, as a person who is allowed to directly participate in the market under the market's operating rules.

This thesis asserts that the meaning of participant makes a distinction between direct and indirect participation. The definition also relies on the incorporation by reference of market operating rules, so it is possible for the rules of specific markets to differentially shape the concept of participant for the Corporations Act.

In the case of the ASX, for example, direct admission to the ASX market would be either as a 'Market Participant' or 'Market Participant (Principal Trader)' into the 'Cash Market' and/or the 'Derivatives Market.' Admission to each market and for each type of participant would be governed by the ASX Operating Rules.[183]

Critically, participation in the ASX market is an activity distinguishable from the official quotation of securities of companies on the ASX. Thus, brokers who would be licensed as financial services providers would need to be admitted as Market Participants by ASX in order to be authorised to deal on behalf of their clients in financial products (for example, officially quoted securities or AEUs). Conversely, companies who wish to have their securities quoted on the ASX market need not be admitted directly to the ASX market as a 'Market Participant.' This interpretation is reinforced by s 793C(3) of the Corporations Act, which deems such companies to be under an obligation to comply with the market integrity rules, but only for the purposes of s 793C. Section 793C vests the Federal Court of Australia with power to order compliance with or enforcement of the operating rules, and s 793C(3) provides:

> For the purposes of this section, a body corporate that is, with its acquiescence, included in the official list of a licensed market, or an associate of such a body corporate, is taken to be under an obligation to comply with the operating rules of that market to the extent to which those rules purport to apply to the body corporate or associate.

The Explanatory Memorandum accompanying the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth) reinforces the distinction between broker and client.[184]

In the *Transmarket Trading case*[185] Perram J considered the standing of the applicants to sue the defendant. In this case, the applicants claimed to have suffered financially by reason of the cancellation by the trading manager of the Sydney Futures Exchange (*SFE*) of 27 trades made in the three minutes after 11.30 am on Wednesday 25 July 2007 and sought damages for their loss.

At 11.30 am on Wednesday 25 July 2007 the Australian Bureau of Statistics released its Consumer Price Index (CPI) data for the June quarter of 2007. The following three minutes of trading on the SFE in certain futures contracts was, in the judgement of the trading manager of the exchange, unusual. After investigating the unusual activity, and purportedly pursuant to the Operating Rules of the exchange, the trading manager then

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[183] 'ASX Operating Rules' (Policy, ASX Limited, 2010); 'A Guide to Becoming an ASX Participant' (Guidance Statement, ASX Limited, 2011).
[184] Explanatory Memorandum, *Corporations Amendment (Financial Market Supervision) Bill 2010* (Cth), 2.11.
[185] *Transmarket Trading Pty Ltd v Sydney Futures Exchange Ltd* (2010) 188 FCR 1.

cancelled 337 trades in specified futures contracts. Of the cancelled contracts, 27 formed part of 'spread positions,' which were purchased by brokers for the applicants. A spread position is the purchase of two futures contracts, the value lying in the price difference between two contracts. Cancelling the 27 contracts that formed part of spread positions therefore drastically altered the financial exposure of the three applicants, especially where the cancelled contracts were one leg only of the spread position.

Perram J summarised the facts, contentions and legal position thus:

> [15] Transmarket is a Full Participant ... and Biskra and Kestral are Local Participants. Accordingly, each is bound by the Operating Rules by force of s 793B.[186]
>
> [16] However, none of the 27 cancelled trades in dispute was executed by the applicants in their capacity as 'participants'. Each of them, in fact, operated through a broker which was also a participant and executed the trades on their behalf ...[187]
>
> [130]The contracts upon which the applicants relied were the statutory contracts between BrokerOne and UBS, as participants, and the exchange. The applicants contended that these contracts had been entered into on their behalfs as undisclosed principals.[188]
>
> [131] The exchange submitted that BrokerOne and UBS did not enter into the Operating Rules in a way which made the applicants a party to them. Consequently, there was no privity of contract between the applicants and the exchange and their claim in contract, therefore, had to fail along with their claim in tort.
>
> [132] *The exchange's submissions are to be preferred*. At the level of theory, it is of course possible that BrokerOne and UBS could have entered into the Operating Rules as the undisclosed agent of the applicants so that they might have become a party to the Operating Rules.[189]

Applying the reasoning of Perram J, Part 3 liable entities and non-liable entities would *not* be participants (unless a broker or a Market Participant (Principal Trader)).

This thesis argues the ratio of the *Transmarket Trading case* is correct. Perram J extended the analysis:

> [134] As party to each trade, BrokerOne and UBS agreed with the exchange that it would not recognise any trust therein. Operating Rule 2.1.5 provided:
>
> > Except as required by Law, no Participant shall be recognised by the Exchange as holding its rights as a Participant upon any trust and the Exchange shall not be bound or compelled in any way to recognise (even where

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[186] (2010) 188 FCR 1, 7.
[187] Ibid 8.
[188] Ibid 34-35.
[189] Ibid (emphasis added).

> it has notice thereof) any equitable contingent future or partial interest in any rights or entitlements in respect of any Participant, except an absolute right to the entirety thereof…
>
> [136] The following emerges clearly:
>
> (a) the exchange intended, by the Operating Rules, that clients would not have any entitlement to sue under those Rules;

The Operating Rules bind only the exchange and brokers, and not the exchange and clients, or the exchange, brokers and clients. Further, no trusts are recognised.

<u>In a carbon market, liable entities are not participants</u>

If AEUs were financial products and officially quoted on the ASX, the definition of participant would capture brokers who would deal in AEUs on behalf of clients and those entities admitted to the ASX as Market Participant (Principal Trader).

Thus even though AEUs would be financial products, unless each liable entity was admitted to participation in the ASX, the market integrity rules would not apply to liable entities under the CPRS Bill (who would be clients of brokers).

A similar shortcoming in the new rules would apply to enforcement. Section 793C provides:

> (1) If a person who is under an obligation to comply with or enforce any of a licensed market's operating rules fails to meet that obligation, an application to the Court may be made by:
> (a) ASIC; or
> (b) the licensee; or
> (c) the operator of a clearing and settlement facility with which the licensee has clearing and settlement arrangements; or
> (d) a person aggrieved by the failure.
>
> (2) After giving an opportunity to be heard to the applicant and the person against whom the order is sought, the Court may make an order giving directions to:
> (a) the person against whom the order is sought; or
> (b) if that person is a body corporate—the directors of the body corporate;
>
> about compliance with, or enforcement of, the operating rules.

Non-liable entities would not be subject to any enforcement action, because they would not be subject to obligations under the market integrity rules. Subsection 793C(3) reinforces this conclusion. It provides:

> (3) For the purposes of this section, a body corporate that is, with its acquiescence, included in the official list of a licensed market, or an associate of such a body corporate, is taken to be under an obligation to comply with the operating rules of that market to the extent to which those rules purport to apply to the body

corporate or associate.

Indeed, the rules put the liable entity (and non-liable entity) in the position of the aggrieved person. Subsections 793C(5) and (6) of the Corporations Act provide:

> (5) For the purposes of this section, if a body corporate fails to comply with or enforce provisions of the operating rules of a licensed market, a person who holds financial products of the body corporate that are able to be traded on the market is taken to be a person aggrieved by the failure.
>
> (6) There may be other circumstances in which a person may be aggrieved by a failure for the purposes of this section.

This thesis argues in chapter seven that new market integrity rules should be applied to liable and non-liable entities in an Australian ETS.

2.7. Synchronisation rule

There is no synchronisation rule planned for an Australia ETS.

Neither the Australian Government in the Green Paper or the White Paper, nor the Garnaut Review, specifically addresses the lack of a synchronisation rule. Instead, there is an implicit reliance on the principle of scarcity to justify unfettered ownership of AEUs. This silence does not make such a rule undesirable.

3. CONCLUSION

The commodification of the right to emit GHGs, embodied in AEUs, is illustrated by the many design elements of the CPRS Bill, including its open-datedness, the absence of a stringent cap (in the presence of a safety valve and importation of IEUs) and coverage and thresholds. Features attending to the acquisition, ownership and disposal of AEUs, such as the ability for them to be acquired by any entity (irrespective of whether liable or not liable under Part 3), as well as the freedom to open a Registry account, participate in auctions and buy, borrow, bank and/or sell AEUs, also demonstrates this commodification.

Speculation divorced from environmental objectives is clearly permitted.

Indeed the pre-GFC design features of the CPRS, combined with its reducing cap, pathways and trajectories, would create a market ideally placed to allow non-liable entities, such as financial intermediaries, to profit from maximising purchases of emissions permits and hoarding.

Environmentally minded action by magnanimous non-liable entities would result in the surrender or cancellation of emissions permits, but action motivated by the desire to increase the returns to capital invested disconnects the GHG emissions of financial intermediaries and their reduction from their use of AEUs.

The ASIC Market Integrity Rules introduced by recent amendments to the Corporations Act and proposed Corporations Regulations improve post-GFC market conduct and regulatory oversight. However, there is doubt that those rules could apply to liable entities under the CPRS Bill, because they would not be participants in the carbon market, unless required to be so licensed. This thesis asserts that neither those market integrity rules nor the CPRS Bill applies to non-liable entities.

Nothing in the existing or proposed legislation counters the design bias for non-liable entities. No provisions condition the transfer of AEUs via a synchronisation rule and an enhanced carbon market integrity regime as proposed by this thesis.

Chapter two analyses the commodification of rights to emit GHG created in the emissions trading schemes of Europe and New Zealand to demonstrate the functional equivalence of the right to emit GHG and contextualise risks that unfettered ownership of emissions units may pose for the Australian ETS.

CHAPTER 2

EMISSIONS UNITS AS COMMODITIES IN OPERATIONAL EMISSIONS TRADING SCHEMES

1. INTERNATIONAL EMISSIONS FRAMEWORK

Climate change is as a global problem, requiring a global solution.[1] In this global context, chapter two analyses the commodification of the right to emit GHG in operational emissions trading schemes. The property right is fundamentally and functionally identical in all ETS – it is the right to emit GHG into the atmosphere, unitised to 1t CO_2-e.

The examination follows the approach of chapter one and furthers the study of the commodification of the right to emit GHG in the international setting. Using a comparative methodology, the chapter compares and contrasts the European Union Emissions Trading Scheme (EU ETS) and the New Zealand Emissions Trading Scheme (NZ ETS). The chapter focuses on legislative rules indicative of identical functionality – commodification of the right to emit GHG, or restrictive of it.

The *United Nations Framework Convention on Climate Change*[2] (*UNFCCC*) and its *Kyoto Protocol*[3] (supplemented by the *Marrakesh Accords*[4]), which Australia has now ratified, shapes global commodification of GHG emissions.[5] *Eligible international emissions units* (*IEUs*) are defined to include Kyoto Units and non-Kyoto international emissions units.[6] Kyoto Units are defined as *certified emissions reduction* credits (*CERs*) generated by *clean development mechanism* (*CDM*) projects, *emissions reduction units* (*ERUs*) generated by *joint implementation* (*JI*) projects, *assigned amount units* (*AAUs*) and *removal units* (*RMUs*) recognised under the Kyoto Protocol.

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[1] Sir Nicholas Stern, *The Economics of Climate Change: The Stern Review* (2007) xiii. Accordingly, emissions and reductions of emissions (actual and notional) of GHG should be the same the world over.
[2] *United Nations Framework Convention on Climate Change,* opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994).
[3] *Kyoto Protocol,* opened for signature 16 March 1998, UN Doc. FCCC/CP/1997/7/Add.1, 10 December 1997 [being the Report of the Conference of the Parties on its third session, held at Kyoto from 1 to 11 December 1997] (entered into force 16 February 2005).
[4] *Marrakesh Accords,* UN Doc. FCCC/CP/2001/13/Add.2, 21 January 2002 [being the Report of the Conference of the Parties on its seventh session, held at Marrakesh from 29 October to 10 November 2001] (entered into force and formally adopted at the first conference of the parties to the Kyoto Protocol in December 2005).
[5] The Kyoto Protocol allocates rights to emit GHG among certain States, and sets an 'assigned amount' for Australia. Australia ratified the Kyoto Protocol on 11 March 2008 and thenceforth Australia committed to other States to achieve GHG emissions reduction of 108 per cent of 1990 levels of national GHG emissions in the first five year commitment period to 31 December 2012.
[6] Carbon Pollution Reduction Scheme Bill 2010 (Cth) (CPRS Bill) s 5.

Eligible emissions units under the CPRS Bill would comprise both IEUs and AEUs.[7] By design, IEUs and AEUs would be substitutes. Substitutability allows direct and indirect linking to the emissions trading schemes of other States.[8] In the future, an Australian ETS may permit the substitution of the emissions permits (the units of currency) of emissions trading schemes in other countries for AEUs, thereby directly linking Australia with those emissions trading schemes in operation in other States.[9]

'*Many developed countries have introduced, or are seriously considering introducing, market based measures to help meet their emissions reduction targets.*'[10] This thesis selects mandatory and operational State emissions trading schemes for study. These include the EU ETS[11] in Europe, in its second phase of operation (from 2008 to 2012), with a third phase planned for 2013 to 2020, and the NZ ETS in New Zealand, operating from 1 January 2010.[12] To the extent that the EU ETS and NZ ETS already permit substitution of CERs and ERUs for their domestic units, an Australian ETS would thereby indirectly link to those emissions trading schemes.

The methodological approach of this chapter reveals:

- the functional commonality in the right to emit GHG;
- the constraints these international schemes impose on unfettered ownership of the right to emit GHG;
- the liability language and how the emissions trading schemes interface with non-liable entities and primary, secondary and derivatives markets; and
- changes proposed to the legislative rules as a result of the GFC.

In turn, this chapter informs the thesis of the lessons learned from the existing emissions trading schemes, which is the focus of chapter four.

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[7] CPRS Bill s 5.
[8] 'Linking involves importing units from other schemes, exporting units from Australia, or both.' Australian Government, Department of Climate Change (DCC), 'Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper' (Australian Government, Department of Climate Change, 15 December 2008) 11-1.
[9] Ibid 11-37.
[10] Multi-Party Climate Change Committee, 'Status of Global Mitigation Action: Current targets and policies in key countries' (Communiqué of Multi-Party Climate Change Committee, 10 November 2010) (emphasis in original).
[11] Commission Directive (EC) 87/2003 as amended.
[12] *Climate Change Response Act 2002* (NZ).

None of the operational emissions trading schemes contain a synchronisation rule or an enhanced carbon market integrity regime as proposed by this thesis.

However, amendments to the EU ETS in 2009 have brought forth an appraisal of the integrity of the EU ETS, foreshadowing that such rules may be adopted.

2. EUROPEAN UNION EMISSIONS TRADING SCHEME

The EU ETS covers emissions trading in the 30 countries that comprise the 27 EU member States (EU-27) plus Norway, Liechtenstein and Iceland. The EU ETS is 'the biggest implementation of a cap-and-trade mechanism to curb emissions worldwide.'[13] For this reason alone, it justifies study.

From 1 January 2013, the EU has unconditionally committed to reduce emissions by 20 per cent below 1990 levels by 2020. This is to be achieved by an equal annual reduction of 1.74 per cent per annum. If the rest of the world adopts reduction commitments, then the EU may increase its target up to 30 per cent below 1990 levels by 2020.

Commission Directive 2003/87/EC of the EU,[14] as amended by (inter alia) *Commission Directive 2004/101/EC*,[15] *Commission Directive 2004/780/EC*,[16] *Commission Decision (EC) No 780/2006*,[17] *Commission Regulation (EC) No 994/2008*,[18] *Commission Directive 2009/29/EC*,[19] and *Commission Regulation (EU) No 1031/2010*[20] establishes the EU ETS as a scheme for trading of rights to emit GHG within the EU.

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[13] EU ETS turnover in 2010 exceeded €100b. Claudia Kettner, Angela Koppl and Stefan Schleicher, 'The EU Emission Trading Scheme: Insights from the First Trading Years with a Focus on Price Volatility' (WIFO Working Papers, No 368, Osterreichisches Institut fur Wirschaftsforschung, 2010) 1.

[14] Commission Directive (EC) 87/2003.

[15] *Commission Directive 2004/101/EC* of the European Parliament and of the Council of 13 November 2004 establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms [2004] OJ L 338/18.

[16] Commission Directive (EC) 101/2004.

[17] *Commission Decision (EC) No 780/2006* of 16 November 2006 on avoiding double couting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Directive 2003/87/EC of the European Parliament and the Council [2006] OJ L 316/12 notified under C(2006) 5362.

[18] *Commission Regulation (EC) No 994/2008* of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council.

[19] *Commission Directive 2009/29/EC* of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community [2009] OJ L 140/63.

[20] *Commission Regulation (EU) No 1031/2010* of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Commission Directive

The EU ETS is a cap-and-trade ETS.

The right to emit GHG in the EU is a commodity, called the *European Emissions Allowance* (*EUA*). Article 12(3) of *Commission Directive 2003/EC/87* requires a liable emitter to surrender sufficient EUAs to its national regulator by 30 April to cover emissions in the previous calendar year ending 31 December.

GHG emissions are made commensurate and their definition in Annex II follows the Kyoto Protocol bundle of gases: CO_2, CH_4, N_2O, SF_6, HCFCs and PFCs.

Like AEUs, EUAs are a commodity capable of abstraction from any environmental objective. The chapter turns now to analyse the features of the EU ETS that are indicative of commodification of the right to emit GHG. In so doing, the analysis parallels and compares and contrasts the EU ETS with the CPRS.

2.1. Long-dated scheme

The first phase of the EU ETS was designated a trial phase, and operated from 1 January 2005 to 31 December 2007. In this trial phase, EUAs expired on 31 December 2007.

Phase II operates from 1 January 2008 to 31 December 2012.

Phase III has been legislated to operate from 1 January 2013 until 31 December 2020.[21]

The EUA is defined to mean an allowance to emit 1t CO_2-e GHG during a specified period. The nature of the EUA does not change by transfer. Any person who is the owner of the EUA will possess the right inherent in the EUA (crystallised upon surrender) to be covered by the EUA for emissions of 1t CO_2-e for each EUA in the period in respect of which the EUA is surrendered. EUAs of Phase II are fungible with EUAs of Phase III. So, unless extended, EUAs will expire on 31 December 2020. Thus, an EUA issued for Phase III in 2013 will be as good for 1t CO_2-e if surrendered in 2013 as it will be good for 1t CO_2-e if surrendered in 2020.

These intertemporal aspects of the EU ETS are indicators of commodification because they enable and support a disconnection between the emission of GHG, the ownership

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2003/87/EC of the European Parliament and the Council establishing a scheme for greenhouse gas emission allowance trading within the Community [2010] OJ L 302,1.

[21] See Commission Directive (EC) 29/2009.

and use of the rights created to permit emissions of GHG (for example, EUAs) and the reduction of emissions.

No liable entity within the EU ETS (and of course, no non-liable entity outside the EU ETS) faces any quantitative restriction on emissions.[22]

Like the CPRS, the consequences for non-compliance are financial consequences only.[23]

2.2. Modified capped scheme

The EU ETS permits limited substitution between EUAs and certain CERs and ERUs.

Unlike the CPRS, the substitution is not without limit: currently, no more than 30 per cent of the surrender obligation of a liable entity may be satisfied with CERs and ERUs.[24]

From 1 January 2013 and as soon as an international agreement on climate change has been reached beyond the Kyoto first commitment period, the EU ETS will accept only credits from projects from States which have ratified that international agreement. However, all existing liable entities will be allowed to use CERs and ERUs during the period from 2008 to 2020 up to the highest of either the amount allowed to them during that period, or to an amount corresponding to a percentage(not below 11 per cent) of their allocation during Phase II.

New entrants, including new entrants in Phase II which received neither free allocation nor an entitlement to use CERs and, as well as new sectors, will be able to use CERs and ERUs up to (not less than) 4.5 per cent of their verified emissions during Phase III. Aircraft operators will also be able to use CERs and ERUs up to an amount (not less than) 1.5 per cent of their verified emissions during Phase III.[25]

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[22] Commission Directive (EC) 87/2003 art 12(3).
[23] Ibid art 16.
[24] Commission Decision (EC) 780/2006; Commission Directive (EC) 101/2004.
[25] Commission Directive (EC) 29 of 2009.

2.3. Coverage and thresholds

Commodification of the right to emit is evidenced in the current coverage of the EU ETS: it is limited to approximately 45 per cent of all emissions in the EU.[26] During Phase II, the EU ETS is limited to specified installations (approximately 11 000), selected activities and selected gases.[27]

An installation is defined in Article 1to be a stationary technical unit where one or more listed activities are carried out. An installation is prohibited from undertaking the activity that results in CO_2 unless the operator holds a GHG emissions permit issued by a competent authority.[28]

At present the gases coverage of the EU ETS in Phases I and II is limited to CO_2, but in Phase III will include the GHG bundle in Annex II: CO_2, CH_4, N_2O, SF_6, HCFCs and PFCs.

Selected activity definitions and thresholds further limit coverage of the EU ETS and reinforce commodification of the EUA. Liability under the EU ETS is ring fenced, similarly to the CPRS, covering energy activities, the mineral industry and other activities:

- Energy activities:
  - combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations);
  - mineral oil refineries;
  - coke ovens;
  - production and processing of ferrous metals;
  - metal ore (including sulphide ore) roasting or sintering installations; and
  - installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2.5 t per hour.
- Mineral industry:

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[26] International Energy Agency, 'Reviewing Existing and Proposed Emissions Trading Systems' (Report, International Energy Agency, 2010) 20.
[27] Ibid. See also Annex 1 of Commission Directive (EC) 87/2003.
[28] Commission Directive (EC) 87/2003 art 4.

- Installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500t per day, or lime in rotary kilns with a production capacity exceeding 50t per day, or in other furnaces with a production capacity exceeding 50t per day;
- Installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20t per day; and
- Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 t per day, and/or with a kiln capacity exceeding 4 m^3 and with a setting density per kiln exceeding 300 kg/m^3.

- Other activities:
  - Industrial plants for the production of:
    - pulp from timber or other fibrous materials; and
    - paper and board with a production capacity exceeding 20t per day.

As in the CPRS, from 1 January 2013, all GHGs shall be covered. Similarly, an installation threshold will be set to 25kt CO_2-e emissions.

2.4. Commensuration

Commensuration is evident in the EU ETS. GHGs are made equivalent via GWP. EUAs substitute (subject to limitations) with CERs and ERUs. And, indirectly (via CERs and ERUs), EUAs and AEUs are linked.

2.5. Allocation, ownership and trading

Ownership of an EUA is not tied to an obligation by the holder of the EUA to reduce emissions, at any time or in any place.

Nor is ownership of an EUA tied to an obligation to use the EUA to acquit the emissions of the holder, at any time or in any place.

Allocation of EUAs to installations in Phase I and in Phase II was grandfathered. Each member State of the EU developed a *National Allocation Plan* (*NAP*) for Phase I and

Phase II of the EU ETS, setting out the total allowances (the cap) it intended to issue for the relevant period, and how it proposed to allocate them.[29]

Article 10 of Commission Directive 87 (EC) of 2003 provides:

> For the three-year period beginning 1 January 2005 Member States shall allocate at least 95 % of the allowances free of charge. For the five-year period beginning 1 January 2008, Member States shall allocate at least 90 % of the allowances free of charge.

Generally, the allocation under the NAPs followed the emissions projected by installations (in turn, based upon historical emissions). Therefore, grandfathering by the EU institutionalised the right to emit GHG inherent in the EUA to States and into the possession of emitters.

One of the identified, and realised, risks in grandfathering on the basis of historical or projected emissions was the potential of over-allocation of EUAs to liable entities,[30] thus effectively transferring from the State to those liable entities the opportunity for windfall profit from the sale of excess EUAs.[31]

Tietenberg (2006) notes that liquidity in an ETS, and hence the pricing of the right to emit within that market, will be dependent upon liable entities being incentivised to trade surplus rights to emit GHG.[32] Yet in practice the availability of surplus rights is determined by scarcity. In a scheme with grandfathered rights, scarcity is determined by the allocation of allowances. The EU NAP process was complex, controversial and has evidenced gaming: it has 'been characterised by lobbying and strategic interaction between industry, member states and the EU Commission.'[33]

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[29] Ibid arts 9, 11.

[30] Regina Betz and Makiko Sato, 'Emissions trading: Lessons learnt from the 1st phase of EU ETS and prospects for the 2nd Phase' (2006) 6 *Climate Policy* 351.

[31] Kettner, Koppl and Schleicher, above n 13; Claudia Kettner et al, 'Stringency and distribution in the EU Emissions Trading Scheme: first evidence' (2008) 8 *Climate Policy* 41; J P M Sijm, 'Tradable Carbon Allowances: The experience of the EU and lessons learned' (Paper presented at the EWC/KDI conference: Climate Change and Green Growth: Korea's National Growth Strategy, Honolulu, 23-24 July 2009).

[32] Tom H Tietenberg, *Emissions Trading: Principles and Practice* (Resources for the Future, 2nd ed, 2006).

[33] Markus Wrake, 'Emissions Trading: The Ugly Duckling in the European Climate Policy?' (Policy Brief, Swedish Environmental Research Institute, 2009) 6. Wrake concludes (with other commentators) that the EU allocation of allowances was generous, as a result of behaviour by nations of the EU reflective of a prisoner's dilemma and a race to the bottom. The same criticism may ultimately be alleged about the CPRS, to the extent that its EITE assistance program would also involve allocation of free AEUs based on historic production.

In litigation between the Republic of Poland and the *Commission of the European Communities* (*Commission*),[34] as well as between the Republic of Estonia and the Commission,[35] the *European Court of First Instance* (*ECFI*) considered challenges to decisions of the Commission to reduce the assigned amounts of the Republics of Poland and Estonia for the purposes of their respective NAPs and consequently distribution of EUAs to installations. Supply, demand and price tensions in EUAs, and hence their value to installations (and indirectly the economic performance of the States in which they are located) raised the question of who owned the rights to the emissions. The Commission argued (within the context of NAPs and the EU ETS) that a situation had to be avoided in which

> surpluses of allowances build up, thereby risking a 'collapse in the market' as happened during the trading period from 2005 to 2007. In its submission, only a 'sufficient rarity of allowances' can contribute to achieving the aim of the Commission Directive.[36]

It was argued that

> the Commission should take into account in its choice of data the fact that the granting of allocations claimed by the Republic of Poland would entail an immediate surplus of allocations and thus an excess of supply on the greenhouse gas trading market, which would have an effect on the price of those allowances.[37]

The ECFI however concluded that:

> only Member States have the power, at the initial stage, to draw up an NAP stating the total quantity of allowances which they propose to allocate for the period concerned and the manner in which they propose to allocate them, and subsequently, to decide the total quantity of allowances which they will allocate for each five-year period.[38]

In a similar empowerment, Article 8(4) of Commission Regulation (EC) No 994/2008 provides that each member State retains ultimate responsibility and authority for the operation and maintenance of their registries of EUAs, AAUs and Kyoto units. Notwithstanding, common operational procedures to give effect to a standardised and secure system of registries were to be agreed.[39]

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[34] *Republic of Poland v Commission of the European Communities*, Case T-183/07, European Court of First Instance, 23 September 2009.
[35] *Republic of Estonia v Commission of the European Communities*, Case T-263/07, European Court of First Instance, 23 September 2009.
[36] Case T-183/07 para 64 (interpolation added).
[37] Ibid.
[38] Ibid para 85.
[39] Commission Regulation (EC) No 994/2008, art 8(5).

Article 14 of Commission Regulation (EC) No 994/2008 requires each member State registry to contain 'operator holding' accounts for each installation. Article 14 also mandates the creation of 'person holding' accounts for each person who so requests pursuant to Article 17.[40]

Thus although EUAs are allocated to installations, any person is able to access the EU ETS, either directly (with their own person holding account) or indirectly via a financial intermediary.

A. Person holding account

Article 17 of Commission Regulation (EC) No 994/2008 provides:

> An application for the creation of a personal holding account shall be submitted to the registry administrator of the Member State registry concerned. The applicant shall provide the registry administrator with the information reasonably required by the registry administrator. That information shall include the information set out in Annex I.
>
> The Annex I information to be provided to the registry administrator for person holding accounts includes:
>
> 1. Name, address, city, postcode, country, telephone number, facsimile number and e-mail address of the person requesting the creation of the person holding account.
> 2. Evidence to support the identity of the person requesting the creation of the person holding account.
> 3. ….
> 4. Name, address, city, postcode, country, telephone number, facsimile number and e-mail address of the primary authorised representative of the account specified by the Member State, the Commission or person for that account.
>
> ….
>
> 7. Evidence to support the identity of the authorised representatives of the account.

Annex 1 information is primarily directed to the establishment of identity of the person. The registry administrator may also require applicants for a personal holding account to agree 'to comply with reasonable terms and conditions.'[41] Once a person is identified,

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[40] Draft EU Registry regulations released by the European Commission on 5 May 2011 propose changes to art 14. The draft EU Registry regulations are discussed in s 2.1C of chapter seven.

[41] Ibid art 17(5). The issues to be addressed in Terms and Conditions are set out in Annex II as follows:

CORE TERMS AND CONDITIONS

Structure and effect of core terms and conditions

1. The relationship between account holders and registry administrators.

The account holder and authorised representative's obligations

2. The account holder and authorised representative's obligations with respect to security, usernames and passwords, and access to the registry website.

Article 17(3) limits each registry administrator to establishing no more than 99 personal holding accounts in any one person's name in its registry!

Person holding accounts are different to operator holding accounts. Operator holding accounts are created for the permitted operator of each installation (i.e. the recipient of EUAs issued free under NAPs). From 1 January 2013, the account holder of a person holding account will not automatically participate in the primary market for EUAs.

B. Auctioning from 1 January 2013

From 1 January 2013, the preferred method of allocation of allowances for the EU ETS will be via auction.[42] Recital 22 to *Commission Regulation (EU) No 1031/2010* (the EU ETS auction regulation) provides:

> Open access is required to encourage participation and, thereby, ensure a competitive auction outcome. Equally, confidence in the integrity of the auction process, in particular *vis-à-vis* participants seeking to distort the

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3. The account holder and authorised representative's obligation to post data on the registry website and ensure that data posted is accurate.
4. The account holder and authorised representative's obligation to comply with the terms of use of the registry website.

The registry administrator's obligations

5. The registry administrator's obligation to carry out account holder's instructions.
6. The registry administrator's obligation to log the account holder's details.
7. The registry administrator's obligation to create, update or close the account in accordance with the provisions of the regulations.

Process procedures

8. The process finalisation and confirmation provisions.

Payment

9. The terms and conditions regarding any registry fees for establishing and maintaining accounts.

Operation of the registry website

10. Provisions regarding the right of the registry administrator to make changes to the registry website.
11. Conditions of use of the registry website.

Warranties and indemnities

12. Accuracy of information.
13. Authority to initiate processes.

Modification of these core terms to reflect changes to this regulation or changes to domestic legislation

Security and response to security breaches

Dispute resolution

14. Provisions relating to disputes between account holders.

Liability

15. The limit of liability for the registry administrator.
16. The limit of liability for the account holder.

Third party rights

Agency, notices and governing law

[42] Commission Directive (EC) 29/2009 art 10. In order to prevent carbon leakage member States will still develop harmonised plans for providing assistance to EU businesses: art 10a, art 10b and art 10c.

> auctions by using them as a vehicle for money laundering, terrorist financing, criminal activity or market abuse is a pre-requisite for ensuring auction participation and a competitive auction outcome. To ensure the integrity of the auctions, access to the auctions should be subject to minimum requirements for adequate customer due diligence checks. To ensure the cost-effectiveness of such checks, *eligibility to apply for admission to the auctions should be given to easily identifiable, well-defined categories of participants*, notably operators of stationary installations and aircraft operators covered by the emissions trading scheme, as well as regulated financial entities such as investment firms and credit institutions. Also business groupings of operators or aircraft operators, such as partnerships, joint ventures and consortia acting as an agent on behalf of their members, should be eligible to apply for admission to bid in the auctions. *Thus, it would be prudent to circumscribe eligibility to apply for admission to the auctions at the beginning* without precluding the possibility of enlarging access to the auctions to further categories of participants in the light of the experience acquired through the auctions or following the Commission's examination pursuant to Article 12(1a) of Commission Directive 2003/87/EC of whether the market for emission allowances is sufficiently protected from market abuse.[43]

Auctioning of allowances will be the norm in Phase III (although the first auction may be held ahead of the commencement of Phase III). Critically for this thesis, the EU ETS auction regulation signals a shift toward *limiting* participation in the primary market for EUAs. It also reflects post-GFC increase in market oversight.

Recital 29 continues:

> The requirement that the auction platform is a regulated market is founded on the desire to use the organisational infrastructure available on the secondary market for the administration of the auctions. In particular, regulated markets are bound under Commission Directive 2004/39/EC and under Commission Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) to provide a number of safeguards in the conduct of their operations.

Article 15 of the EU ETS auction regulation provides that only a person who is eligible to apply for admission to bid pursuant to Article 18 and is admitted to bid pursuant to Articles 19 and 20 may submit bids directly in an auction. *In contrast to the design of the CPRS Bill*, participation in EU ETS auctions will not be open to all. Article 18 provides:

> Persons eligible to apply for admission to bid.
>
> 1. The following persons shall be eligible to apply for admission to bid directly in auctions:

[43] Ibid (emphasis added).

(a) an operator or an aircraft operator having an operator holding account, bidding on its own account, including any parent undertaking, subsidiary undertaking or affiliate undertaking forming part of the same group of undertakings as the operator or the aircraft operator;
(b) investment firms authorised under Commission Directive 2004/39/EC bidding on their own account or on behalf of their clients;
(c) credit institutions authorised under Commission Directive 2006/48/EC bidding on their own account or on behalf of their clients;
(d) business groupings of persons listed in point (a) bidding on their own account and acting as an agent on behalf of their members;
(e) public bodies or state-owned entities of the Member States that control any of the persons listed in point (a).

Liable entities will be permitted to participate in auctions.[44] Recall that in order for an operator to have an operator holding account, the operator must first have been issued with a permit.

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[44] Art 19, dealing further with requirements for admission to bid, provides:

1. When an auction platform organises a secondary market, members or participants of the secondary market organised by an auction platform auctioning two-day spot or five-day futures that are eligible persons pursuant to art 18(1) or (2) shall be admitted to bid directly in the auctions conducted by that auction platform without any further admission requirements, provided that all of the following conditions are fulfilled:
   (a) the requirements for admission of the member or participant to trade allowances through the secondary market organised by the auction platform auctioning two-day spot or five-day futures are no less stringent than those listed under para 2 of this art;
   (b) the auction platform auctioning two-day spot or five-day futures receives any additional information necessary to verify the fulfilment of any requirements referred to in para 2 of this art that have not been previously verified.
2. Persons, who are not members or participants of the secondary market organised by an auction platform auctioning two-day spot or five-day futures, and that are eligible persons pursuant to art 18(1) or (2) shall be admitted to bid directly in the auctions conducted by that auction platform provided that they:
   (a) are established in the Union, an operator or an aircraft operator;
   (b) hold a nominated holding account;
   (c) hold a nominated bank account;
   (d) appoint at least one bidder’s representative as defined in the third subpara of art 6(3);
   (e) satisfy the auction platform concerned in line with applicable customer due diligence measures as to their identity, the identity of their beneficial owners, integrity, business and trading profile having regard to the means of establishing the relationship with the bidder, the type of bidder, the nature of the auctioned product, the size of prospective bids, and the means of payment and delivery;
   (f) satisfy the auction platform concerned of their financial standing, in particular, that they are able to meet their financial commitments and current liabilities as they fall due;
   (g) have in place or are able to put in place when requested, the internal processes, procedures and contractual agreements necessary to give effect to a maximum bid-size imposed pursuant to art 57;
   (h) fulfil the requirements of art 49(1).

Investment firms and credit institutions may participate in auctions, but only if they are authorised entities, and further, only if they are authorised by relevant member State authorities to bid in carbon auctions on their own account or on behalf of clients.[45] Notably, if investment firms and credit institutions bid on behalf of clients, they must ensure that those clients are themselves eligible to apply for admission to bid[46]

In contrast to the design of the CPRS Bill, non-liable entities will not be permitted to participate in auctions as of right. Financial intermediaries must pass the tests in the EU ETS auction regulations designed to keep them out of the primary market and to limit market abuse.

Enhanced oversight of auction participation will include regulator surveillance, remedial measures and sanctions.

Articles 54-59 of Chapter XV of the EU ETS auction regulations impose tight pre-emptive and timely retro-active constraints on auctions. Article 54 requires the auction platform to monitor the relationship with bidders, by:

> (a) scrutinising bids made throughout the course of that relationship to ensure that the bidding behaviour of bidders is consistent with the auction platform's knowledge of the customer, its business and risk profile, including, where necessary, the source of funds;
> (b) maintaining effective arrangements and procedures for the regular monitoring of the compliance by persons … with its market conduct rules;
> (c) monitoring transactions undertaken by persons … using its systems in order to identify breaches of the rules referred to in point (b) of this subparagraph, unfair or disorderly auctioning conditions or conduct that may invoke market abuse.

Notification is mandated for suspected money laundering, terrorist financing or criminal activity[47] as well as suspected market abuse[48] by bidders (or persons on whose behalf bids are lodged). Further:

> A maximum bid-size, or any other remedial measures necessary to mitigate an actual or potential discernible risk of market abuse, money laundering, terrorist financing or other criminal activity, as well as anti-competitive behaviour, may be imposed by any auction platform.[49]

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[45] Ibid art 18(3).
[46] Clients must qualify to bid under Article 18(1).
[47] Ibid art 55.
[48] Ibid art 56.
[49] Ibid art 57.

Articles 58 and 59 of the EU ETS auction regulations provide for market conduct rules. The market conduct rules will apply to investment firms and credit institutions (financial intermediaries) authorised to bid on their own account or on behalf of clients in auctions. Article 59 provides that financial intermediaries (inter alia):

> 2. … shall apply the following conduct rules in their relationship with their clients:
>   - (a) they shall accept instructions from their clients on comparable terms;
>   - (b) they may refuse to bid on behalf of a client if they have reasonable grounds to suspect money laundering, terrorist financing, criminal activity or market abuse, subject to national legislation transposing Articles 24 and 28 of Commission Directive 2005/60/EC;
>   - (c) they may refuse to bid on behalf of a client if they have reasonable grounds to suspect that the client is unable to pay for the allowances for which it is seeking to bid;
>   - (d) they shall enter into a written agreement with their clients. Agreements entered into shall not impose any unfair conditions or restrictions on the client concerned. They shall provide for all the terms and conditions relating to the services offered including in particular payment and delivery of the allowances;
>   - (e) they may require their clients to make a deposit by way of advance payment for allowances;
>   - (f) they may not unduly limit the number of bids that a client might submit;
>   - (g) they may not prevent or restrict their clients from engaging the services of other entities eligible pursuant to Article 18(1)(b) to (e) and Article 18(2) to bid on their behalf in the auctions;
>   - (h) they shall pay due regard to the interests of their clients who request them to submit bids on their behalf in the auctions;
>   - (i) they shall treat clients fairly and without discrimination;
>   - (j) they shall maintain adequate internal systems and procedures to process requests from clients to act as agent in an auction and to be able to participate effectively in an auction in particular with regard to the submission of bids on behalf of their clients, collect payment and collateral from and transfer allowances to clients for whom they act;
>   - (k) they shall prevent the disclosure of confidential information from that part of their business responsible for receiving, preparing and submitting bids on behalf of their clients to that part of their business responsible for preparing and submitting bids on their own account or to that part of their business responsible for dealing on their own account on the secondary market;
>   - (l) they shall keep records of information obtained or created in their role as intermediaries handling bids on behalf of their clients in the auctions, for five years from the date of obtaining or creating the information concerned.

These rules, like the ASIC market integrity rules (discussed in s 2.6E of chapter one) do not extend to installations directly. However, the rational for this approach is the belief that the EU ETS auction regulations were robust enough to compel desired behaviour of operators. However, as noted, draft European Commission regulations for the EU Registry released on 5 May 2011 are designed to further tighten the Registry account rules in the EU ETS (see chapter seven).

Article 60(3) provides for publication on auction platform websites of 'a list of the names, addresses, telephone and facsimile numbers, electronic mail addresses and websites of all persons admitted to bid on behalf of others in auctions,' however the names of beneficial owners, the number of allowances which a bidder wishes to acquire in an auction and the price which a bidder is willing to pay for those allowances are not required to be disclosed.[50]

There is no synchronisation rule in the EU ETS auction regulations. Thus the rules that will apply to the primary market from 1 January 2013 will not apply to secondary markets and derivative markets.

2.6. Transfer of EUAs

The EUA, like the AEU, is a commodity.

Each EUA carries an allowance to emit 1t CO_2-e during a specified period, and is valid only for the purposes of meeting the requirements of the directives.

The EU ETS assumes that EUAs are property, for they are fully transferable within the European Community in accordance with the directives, and in limited circumstances, via linking within third countries listed in Annex B of the Kyoto Protocol.[51]

2.7. International linking

In Phase II of the EU ETS, the use of CERs and ERUs to cover liability under the EU ETS is limited to 30 per cent of allowances surrendered.

In the period from 2008 to 2020, the EU ETS aims to ensure that the overall use of CERs and ERUs does not exceed 50 per cent of EU reductions below 2005 levels, and

[50] Ibid art 61(5)(c).
[51] Commission Directive (EC) 101/2004 art 25.

50 per cent of EU reductions below 2005 levels for new sectors and aviation over the period from the date of their inclusion in the scheme to 2020.

From 1 January 2013, measures may be applied to restrict the use of CERs and ERUs generated from projects involving destruction of HFC-23 and N_2O.[52]

Although the EU has agreed to continue the EU ETS to 31 December 2020, the scheme makes no provision for direct linking with any other ETS. As noted, importation into the EU ETS of CERs and ERUs provides indirect linking with other functioning emissions trading schemes, including potentially with the CPRS.

2.8. Banking and borrowing

EUAs in Phase I expired 31 December 2007 and became worthless at that date.

EUAs in Phase II are scheduled to expire on 31 December 2020, the end of Phase III. They may be banked from Phase II into Phase III.

Since the allowance allocation in the EU ETS spans phases, borrowing of EUAs within phases is permitted (noting however that surrendered allowances are cancelled).

The EUA is therefore truly a fungible commodity.

2.9. Industry assistance programs

For Phase III a community-wide assistance program, similar to the EITE assistance program proposed in Australia, will be implemented to stem carbon leakage.

2.10. Other commodification features of the EUA

There are many similarities between the EU ETS and the proposed CPRS, which illustrate the parallel in commodification between AEUs and EUAs. However, the EU ETS also has the benefit of five years operation, and new provisions recently inserted to account for operational experiences and the GFC.

A. Penalties

Article 16 of Commission Directive 2003/87/EC provides for penalties which are 'effective, proportionate and dissuasive,' and requires publication of names of operators who are in breach of their surrender obligations.

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[52] Discussed in lesson 3 in chapter four.

The emissions fee for a surrender shortfall is set at €100 per tonne of the excess emissions for Phase II, and in Phase III is indexed for the European CPI from 1 January 2013. The EU ETS also requires a 100 per cent make good of any surrender shortfall for a calendar year, in the next following calendar year. Notwithstanding that the financial penalty is currently out-of-market by approximately five times,[53] technically the penalty regime could act as a safety valve. Further, the penalty regime permits a disconnection between the GHG emissions in any year and the time for surrender of sufficient EUAs to cover those emissions – further indication of the commodification of the right to emit.

The penalty regime does not apply to non-liable entities.

B. Anti-abuse rules

There is no general anti-avoidance rule in the EU ETS, nor are there rules in the directives currently protecting the carbon market from abuse. Amendments in 2009 (discussed in 2.10C and in chapter seven) make provision for consultation and incorporation of such rules.

Has the absence of such provisions adversely affected the EU ETS?

A notable feature of the performance of the EU ETS has been the volatility of prices for EUAs. Commentators have suggested that the price volatility observed, especially in Phase I, was due to a weak emissions cap due to an over-allocation of emissions allowances.[54] Figure 2.1 illustrates the price volatility from late 2004 to late 2009.[55]

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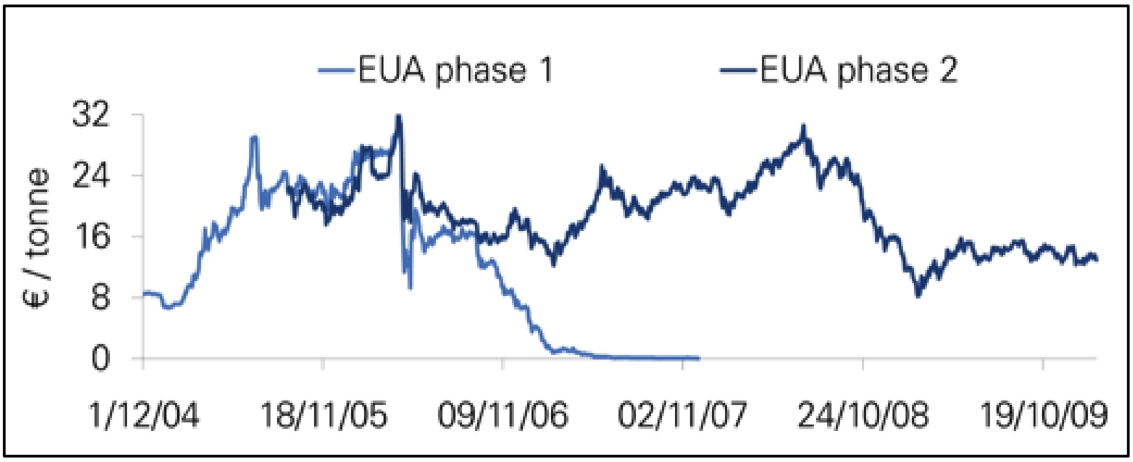
[53] During 2010, the EUA has traded in the range of €12 to €16 approximately: BlueNext, *EU ETS Statistics* (January 2011), BlueNext SA <http://www.bluenext.eu/>.

[54] Kettner, Koppl and Schleicher, above n 13; Kettner, above n 31; Wrake, above n 33; Sijm, above n 31; Gerald H Kelly, 'An Evaluation of the European Union's Emissions Trading Scheme in Practice' (2006) 15(6) *European Environmental Law Review* 175; Joseph Kruger and William A Pizer, 'The EU Emissions Trading Directive: Opportunities and Potential Pitfalls' (Discussion Paper 04-24, Resources for the Future, 2004); Amir Kordvani, 'An Assessment of the Efficiency of the European Union Emissions Trading Scheme' (Paper presented at the AMPLA 31st Annual Conference, Gold Coast, Australia, 10-12 October 2007).

[55] Point Carbon, 'Key findings, figures and tables in Return of the Sovereign' (Carbon Markets Report 2010, Point Carbon, March 2010).

Figure 2.1: Price volatility in the EU ETS



The price crash experienced in June 2006 was predictable. There was an over-allocation of EUAs, based on historical and projected emissions data submitted by installations, as part of the process for setting NAPs.[56] When, based on the actual emissions performance of installations, it became evident in June 2006 that the supply of EUAs far exceeded the expected demand for them, scarcity (and price support) evaporated. Those installations that had sold their excess EUAs profited handsomely, which is a major reason why auctioning will be introduced for Phase III.[57]

Why did installations predict emissions grossly in excess of their actual emissions? No doubt, there may be many answers to this question: the absence of an anti-abuse rule designed to stop or penalise such behaviour could also be an answer.

C. *Carbon market integrity*

Amendments to Commission Directive 2003/87/EC by Commission Directive 2009/29/EC (made 23 April 2009, after the GFC) insert new Article 10(5),[58] Article 12(1a)[59] and Articles 29 and 29a into the EU ETS.[60]

Article 10(5) provides:

> The Commission shall monitor the functioning of the European carbon market. Each year, it shall submit a report to the European Parliament and to the Council on the functioning of the carbon market including the implementation of the auctions, liquidity and the volumes traded. If

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[56] Ibid.
[57] Ibid.
[58] Commission Directive 2003/87/EC art 11.
[59] art 15.
[60] art 28.

> necessary, Member States shall ensure that any relevant information is submitted to the Commission at least two months before the Commission adopts the report.

Responsibility for national registries currently rests with EU Member States, but will be assumed by the European Commission from 1 January 2013. Chapter four of this thesis examines a selection of the serious problems experienced with the EU ETS, for example, fraud, carousel fraud, phishing scams, recycling and theft. Making provision for and improving carbon market oversight in the light of these experiences and the GFC highlights the regulatory intervention necessary to maintain an orderly market.

For the same reason, Article 12(1a) provides:

> The Commission shall, by 31 December 2010, examine whether the market for emissions allowances is sufficiently protected from insider dealing or market manipulation and, if appropriate, shall bring forward proposals to ensure such protection. The relevant provisions of Commission Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) may be used with any appropriate adjustments needed to apply them to trade in commodities.

The report of the European Commission is under development as at 15 May 2011. A communication from the European Commission to the European Parliament and the Council (*Market Oversight Communication*), 'Towards an enhanced market oversight framework for the EU Emissions Trading Scheme' (21 December, 2010), concluded:

> The market needs to have an appropriate market oversight framework. Such a framework needs to secure fair and efficient trading conditions for all market participants through transparency requirements as well as by preventing and sanctioning market misconduct, in particular insider dealing and market manipulation. Such a framework should also provide safeguards to minimise the risk that the carbon market is used as a vehicle for other illegal activities, such as money laundering or VAT fraud.[61]

This Market Oversight Communication is analysed in detail in s 2.1B of chapter seven.

New Article 29 provides:

> Report to ensure the better functioning of the carbon market
>
> If, on the basis of the regular reports on the carbon market referred to in Article 10(5), the Commission has evidence that the carbon market is not functioning properly, it shall submit a report to the European

[61] European Commission, Communication from the Commission to the European Parliament and the Council, 'Towards an enhanced market oversight framework for the EU Emissions Trading Scheme', (COM (2010) yyy [sic] final, European Commission, 21 December 2010) (*Market Oversight Communication*) 2.

> Parliament and to the Council. The report may be accompanied, if appropriate, by proposals aiming at increasing transparency of the carbon market and addressing measures to improve its functioning.

The Market Oversight Communication addresses market functionality by considering carbon market abuse, but only in its technical sense, as defined in *Commission Directive 2003/6/EC*[62] (the *Market Abuse Commission Directive*) – insider trading and market manipulation. However, the Commission noted it ought to focus more broadly on other forms of market misconduct and abuse, such as money laundering, terrorist financing and other criminal activities, in order to ensure that 'the integrity of the carbon market is sufficiently protected.'[63] In this regard, new Article 29a provides (inter alia):

> Measures in the event of excessive price fluctuations
>
> 1. If, for more than six consecutive months, the allowance price is more than three times the average price of allowances during the two preceding years on the European carbon market, the Commission shall immediately convene a meeting of the Committee established by Article 9 of Decision No 280/2004/EC.
> 2. If the price evolution referred to in paragraph 1 does not correspond to changing market fundamentals, one of the following measures may be adopted, taking into account the degree of price evolution:
>   (a) a measure which allows Member States to bring forward the auctioning of a part of the quantity to be auctioned;
>   (b) a measure which allows Member States to auction up to 25 % of the remaining allowances in the new entrants reserve.
>
>   Those measures shall be adopted in accordance with the management procedure referred to in Article 23(4).
> 3. Any measure shall take utmost account of the reports submitted by the Commission to the European Parliament and to the Council pursuant to Article 29, as well as any other relevant information provided by Member States.

Chapter seven will consider new Articles 29 and 29a in detail, and also compare new Article 29a to the provisions of the ACES Act and APA. It will be noted now that these new amendments all occurred in response to the GFC.

D. Synchronisation rule

There is no synchronisation rule in the EU ETS.

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[62] *Commission Directive 2003/6/EC* of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) [2003] OJ L 96, 16.
[63] Market Oversight Communication, above n 61, 6.

3. NEW ZEALAND EMISSIONS TRADING SCHEME

The NZ ETS is the latest national ETS to be established. It was modelled deliberately on the CPRS.[64] This fact, together with the closeness of New Zealand to Australia, and expectation of a trans-Tasman emissions trading market, justify it for study.

New Zealand's emissions account for a mere 0.2 per cent of global emissions.[65] New Zealand ratified the Kyoto Protocol on 19 December 2002. The Annex B target of emissions for New Zealand in the first commitment period is 100 per cent of New Zealand's 1990 GHG emissions. The New Zealand Government announced an emissions reduction target of 10 to 20 per cent below 1990 levels by 2020, and 50 per cent below 1990 levels by 2050.[66] The NZ ETS cap set for 2020 mirrors these reduction targets.

New Zealand first enacted its *Climate Change Response Act 2002* (NZ) (*CCR Act*) in 2002.[67] The CCR Act was amended by the *Climate Change (Emissions Trading Amendment) Act 2008* (NZ),[68] and made provision for a cap-and-trade ETS for New Zealand to be operative from 1 January 2009. This scheme (except for its coverage of forestry) was suspended upon a change of government in New Zealand in November 2008. Following a Parliamentary Inquiry, the New Zealand Government passed the *Climate Change Response (Moderated Emissions Trading) Act 2009* (NZ),[69] giving effect to the NZ ETS, which commenced from 1 January 2010.[70]

The NZ ETS is a cap-and-trade scheme.

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[64] Dr Nick Smith, 'New Zealand Government' (Paper presented at the Australia-New Zealand Climate Change and Business Conference, Melbourne, Australia, 25 August 2009).

[65] New Zealand's national GHG emissions in 2007 amounted to 75.6 Mt CO_2-e, up 22 per cent on 1990 levels: of these, agriculture was responsible for 49 per cent (mostly methane released from livestock and nitrous oxide from animal excrement), energy was responsible for 43 per cent (two-thirds of New Zealand's energy is currently supplied by renewable energy programs), industrial processes accounted for six per cent and waste accounted for two per cent.

[66] Climate Change Minister Nick Smith, 'Government sets -50% by 2050 emissions reduction target' (Press Release, 31 March 2011).

[67] In 2002 the New Zealand Government announced policy to direct effective climate change response. This policy proposed carbon tax on energy, industry and transport emissions capped at NZ$25 per tonne, established negotiated GHG agreements (*NGAs*) for emitters who faced a significant loss of competitiveness and committed to undertake projects that would reduce emissions to earn Kyoto units. A policy review occurred in 2005. The proposed carbon tax was abolished for the first Kyoto commitment period therefore halting the government from entering into any new NGAs. In 2007 the New Zealand Government announced a new package of climate change policies, including an emissions trading scheme.

[68] Act No 85 of 2008.

[69] Act No 57 of 2009, assented 7 December 2009.

[70] Note that regulations also affect sector specific emitters.

Liable entities (called *participants*) must monitor and record their emissions in a year and surrender *units* (a defined term that includes Kyoto units, New Zealand units (*NZUs*) and approved overseas units) sufficient to cover those emissions.[71]

The chapter turns now to analyse the features of the NZ ETS that are indicative of commodification of the right to emit GHG. In so doing, the analysis parallels and compares and contrasts the NZ ETS with the proposed CPRS.

3.1. Open-dated scheme

The NZ ETS, like the proposed CPRS, has no end date.

An NZU also has no end date. An NZU once issued has an indefinite life, remaining valid until surrendered, cancelled or converted.[72]

Subsection 18(3) of the CCR Act provides that a unit is:

> (a) indivisible with respect to the issue, holding, transfer, retirement, replacement, surrender, carry-over, cancellation, and conversion of a unit within the unit register; and
> (b) transferable, subject to any regulations made under this Act,

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[71] *Climate Change Response Act 2002* (NZ) (*CCR Act*), ss 62 and 63.
Section 62 of the CCR Act provides for monitoring of emissions and removals:

> A participant must, in respect of each activity listed in sch 3 or 4 that is carried out by the participant in a year,—
> (a) collect the prescribed data or other prescribed information (which data or information must, if required by regulations made under this Act be verified by a person or organisation recognised by the chief executive under s 92); and
> (b) calculate the emissions and the removals from the activity in accordance with the methodologies prescribed in regulations made under this Act; and
> (c) if required by regulations made under this Act have the calculations verified by a person or organisation recognised by the chief executive under s 92; and
> (d) keep, in the prescribed format (if any), records of the data or information and calculations.

Section 63 provides for surrender:

> (1) A participant is liable to surrender 1 unit for each whole tonne of emissions from each activity listed in schedule 3 or 4 that the participant carries out,
> (a) as calculated in accordance with this Act; and
> (b) at the times required under this Act.
> (2) If a participant is liable to surrender units under this Act the participant must make an application under s 18C to transfer the required number of units from the participant's holding account to a surrender account designated by the chief executive.

[72] CCR Act ss 18, 18C.

(i) within the unit register; or
(ii) between the unit register and overseas registries.

The nature of an NZU will not change by transfer. Any person who is the owner of the NZU will possess the right inherent in the NZU (crystallised upon surrender) to be covered by the NZU for 1t CO_2-e in the period in respect of which the NZU is surrendered.[73] Thus, an NZU issued in 2013 will be as good for 1t CO_2-e if surrendered in 2013 as it will be good for 1t CO_2-e if surrendered in 2020.

These intertemporal aspects of the NZ ETS are indicators of commodification because they enable and support a disconnection between the emission of GHG, the ownership and use of the rights created to permit emissions (for example, NZUs) and the reduction of emissions.

The disconnection is particularly illustrated by the provisions of s 18D of the CCR Act. It provides for succession, as follows:

> (1) This section applies if an account holder—
> (a) is a natural person and dies; or
> (b) is not a natural person and is wound up, liquidated, dissolved, or otherwise ceases to exist.
>
> (2) If this section applies, the person listed on the holding account as the account holder's representative may operate the holding account until—
> (a) a successor is determined; and
> (b) the Registrar is informed of that determination in writing.
>
> (3) If a successor is determined, and the Registrar is informed of that determination in writing, the Registrar must register the successor as the account holder.

No participant in the NZ ETS (and no non-liable entity outside the NZ ETS) faces any quantitative restriction on emissions.[74]

3.2. Modified capped scheme

Although described as a cap-and-trade ETS, two features of the NZ ETS effectively uncap it.

First, NZUs substitute by design with Kyoto units and approved overseas units. In s 4 of the CCR Act, unit is defined to include NZUs, Kyoto units and approved overseas units. Kyoto units are defined as the entire unit types specified in the Kyoto Protocol: AAUs,

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[73] Ibid s 63.
[74] Ibid.

CERs, ERUs, long-term CERs, RMUs, and temporary CERs. Unlike the CPRS and similar to the EU ETS, the substitution is subject to limitations.[75]

Second, in a transition period to 31 December 2012, NZUs may be purchased from the New Zealand Government under a safety valve of NZ$25.00 per unit.

3.3. Coverage and thresholds

The NZ ETS covers the same six GHGs outlined in the Kyoto protocol.[76] Unusually, the NZ ETS proposes to cover all sectors of the economy by 2015.

Participation in the NZ ETS is mandatory for liable entities, but voluntary opt-in is available to a select range of non-liable entities.

Schedule 3 of the CCR Act provides for mandatory participation for:

- owners of pre-1990 forests who deforest;
- importers/miners/extractors of coal, natural gas, geothermal resources and used oil and refinery;
- industrial processes such as producing iron, steel, glass or gold;
- the importation or removal from a refinery of liquid fossil fuels;
- importers of synthetic GHG;
- operators of waste facilities; and
- from 2015, agriculture, including the importation or manufacture of fertiliser as well as slaughter of animals and dairy processing.

Schedule 4 of the CCR Act provides for voluntary participation for major users of jet fuel (greater than 10 million litres per year); coal (greater than 250 000t per year); and natural gas (greater than 2 petajoules per year).

Section 54 of the CCR Act specifies that:

> (1) A person is a participant,—
> (a) in respect of an activity listed in Schedule 3, if the person—
> (i) is required under s 180, 204, or 213 to be treated as the person carrying out the activity; or
> (ii) if subparagraph (i) does not apply, carries out the activity; and

[75] Ibid ss 16, 17, 18CB, 18CC, 18CD and 19.
[76] Ibid s 4.

(b) in relation to an activity listed in Schedule 4, if the person—
   (i) carries out the activity, is registered as a participant under s 57 in respect of the activity, and that registration has taken effect; or
   (ii) becomes a participant under s 192 in respect of the activity and is not removed from the register in respect of that activity.

(2) Any reference in this Part or Part 5 to a person or participant carrying out an activity must be read as referring to the person who is to be treated under s 180, 204, or 213 as carrying out the activity, or if those ss do not apply, to the person or participant carrying out the activity.

(3) Subsection (1)(a) is subject to any exemption under an Order in Council made under s 60.

(4) A person who was a participant under s (1) continues to be a participant for the purposes of this Act in respect of any obligations (including, but not limited to, the obligation to retain records in accordance with s 67), or entitlements under s 64, arising in respect of an activity listed in Schedule 3 or 4 that the person carried out while a participant.

If the sector in which a participant operates enters the scheme, mandatory participants have 20 working days to register. The timeframe for sectors to enter the NZ ETS has been staggered. Forestry commenced from 1 January 2008, and transportation, electricity generation and industrial processes commenced from 1 July 2010. Synthetic GHG and waste will be covered from 1 January 2013, and agriculture from 1 January 2015.

In a transition period (1 July 2010 to 31 December 2012) participants in the energy, industrial, fishing and fossil fuel sectors need surrender only one NZU for every 2 t CO_2-e emissions.

3.4. Commensuration

The unit of currency in the NZ ETS is the *New Zealand Unit* (*NZU*). One NZU is equal to 1t CO_2-e emission, calculated using GWP as referenced by Article 5.3 of the Kyoto Protocol.[77]

GHG is the bundle of six gases in Annex A to the Kyoto Protocol.[78]

3.5. Ownership of NZUs

The NZU, like the AEU and the EUA, is clearly a commodity.

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[77] Ibid.
[78] Ibid.

An owner of an NZU may hold it, cancel it, surrender it, convert it or transfer it.

Ownership of an NZU is not tied to an obligation by the holder of the NZU to reduce emissions, at any time or in any place.

Nor is ownership of an NZU tied to an obligation to use the NZU to acquit the emissions of the holder, at any time or in any place.

Save for the requirement to have a holding account, there is no restriction on who may own an NZU. Section 61 of the CCR Act merely provides that:

> (1) A participant or an eligible person [that is, a person who meets any requirements for receiving an allocation of NZUs specified in subsections 80(1) or 85(1) of the CCR Act, or any regulations made under the Act, or an allocation plan] must have a holding account for the purpose of—
>
> (a) surrendering units or repaying units as required under this Part or Part 5:
>
> (b) receiving New Zealand units to which the participant or eligible person is entitled under this Part or Part 5.
>
> (2) Despite anything in s (1), a person who does not have a holding account at the time the person becomes a participant complies with s (1) if the person complies with s 56(1)(b) or 57(3), as the case may require.
>
> (3) Despite anything in this Act, the Registrar must, subject to s 18A(5), open a holding account in the name of—
>
> (a) a person—
>
> (i) who applies to open a holding account in accordance with s 56(1)(b) or 57(3); and
>
> (ii) whose name has been entered on a register kept for the purposes of s 56 or 57; or
>
> (b) an eligible person.

Section 18A empowers the regulator to open a holding account for anyone. It provides:

> (1) Any person may submit an application to the Registrar to open 1 or more holding accounts in the unit register by using the form and paying the fees (if any) prescribed in regulations made under this Act.
>
> (2) The Registrar may approve the opening of a holding account subject to any regulations made under this Act.

The NZ Registry account opening rules require identity and status information. The *Climate Change (Unit Register) Regulations 2008* (NZ) prescribe the procedures for opening a holding account. Regulation 4 provides that to open a holding account:

- a proposed account holder must be a qualified person; and
- an on-line application must be completed; and
- the following information must be supplied:

    - the proposed name for the account;
    - the proposed account holder's full legal name, account name, physical address for service in New Zealand, postal address, telephone number, and email address; and
    - New Zealand or Australian corporate registration number.

A qualified person is:

- a participant in the NZ ETS; or
- a person who receives or is entitled to receive free NZUs; or
- an individual who is 18 years of age or older and is not:
    - an undischarged bankrupt; or
    - subject to a property or personal order under the *Protection of Personal and Property Rights Act 1988* (NZ); or
    - prohibited from being a director or promoter of a company or unincorporated entity; or
    - a person who has been convicted of an offence under the *Companies Act 1993* (NZ) or a crime involving dishonesty; or
    - a person to whom a provision of a comparable law in another jurisdiction applies; or
- a company that is a New Zealand or Australian company or a company incorporated elsewhere registered in New Zealand and is not:
    - in liquidation; or
    - being wound up or under statutory management; or
    - has a director or officer who is not qualified to open a holding account; or
    - has a majority shareholder who is not qualified to open a holding account; or
    - has been convicted of an offence under the *Companies Act 1993* (NZ) or a crime involving dishonesty; or
    - a company to whom a provision of a comparable law in another jurisdiction applies.

Subregulation 4(4) provides that the Registrar may not approve the opening of a holding account in the name of the proposed account holder unless the Registrar has received a declaration that contains a signed statement that the proposed account holder authorises the opening of a holding account in their name, they are a qualified person and the information provided by the applicant is true and accurate.

Ownership of an NZU is unfettered and participation in the NZ ETS is open, save for the Registry account opening regulations requiring an applicant to prove identity, credit-worthiness, and genuineness (tested through disclosure of crimes of dishonesty). Financial intermediaries are not participants in the NZ ETS (that is, they are not liable entities). Non-liable entities face none of the NZ ETS obligations and need not monitor nor report their emissions, for they are well outside the CCR Act.

3.6. Trading of NZUs

NZUs may only be traded domestically. Unlike the CPRS, New Zealand assigned amount units (*NZ AAUs*) may be earned as carbon credits and traded in the NZ ETS. This further evidences commodification because the NZ AAU is commensurate with NZUs.

3.7. Transfer of NZUs

Transfer of NZUs requires that an account must be opened in the New Zealand Emission Unit Registry (*NZEUR*).

The NZEUR only records unit holders (including trustee relationships) as well as units held and/or surrendered. It does not hold information on value or price of units, domestic or international.

3.8. International linking

The NZU (and NZ AAU) substitutes with AAUs.

The NZU is commensurate with AEUs, EUAs, CERs and ERUs. However, the NZU is not directly linked to the AEU, and therefore does not qualify as an IEU in Australia or substitute with AEUs.

3.9. Banking and borrowing

The NZ ETS will operate in the same way as the CPRS, whereby any excess of units required for the relevant year may be traded privately or banked to meet future commitments.

3.10. Industry assistance programs

In the transition period, NZUs will be either allocated to certain businesses for no charge (e.g. under an NGA) or may be purchased from the New Zealand Government for NZ$25.00 per unit.

The transition timetable also provides for industry assistance for the energy, industrial, fishing and fossil fuel sectors by reducing the surrender obligation by half.

3.11. Other commodification features of the NZ ETS

A. Penalties

Penalties under the NZ ETS are low by international comparison. Participants may face possible liability for financial penalties of up to NZ$24 000 for failing to register, failing to collect emissions data, failing to calculate emissions and/or removals, and failing to submit an emissions return when required. Penalties of up to NZ$50 000 apply for knowingly altering, falsifying or providing incomplete or misleading information, and up to NZ$50 000 and/or five years prison for deliberately lying about obligations under the scheme to gain financial benefit or avoid financial loss.

Failure to surrender units when required will result in forced surrender or cancellation of those units and an emissions penalty of NZ$30.00 for each emission unit. This financial penalty is not significantly out-of-market.

B. Anti-abuse rules

There is no general or specific anti-avoidance provision in the NZ ETS. Nor are there provisions protecting the carbon market from abuse.

C. Carbon market integrity

There is no market integrity regime in the NZ ETS.

D. Synchronisation rule

There is no synchronisation rule in the NZ ETS.

4. CONCLUSION

This chapter analysed the design features of the EU ETS and the NZ ETS which create the right to emit GHG, and hence are indicative of commodification. Box 2.1 compares the emissions trading schemes.

Unfettered ownership is clearly permitted in these emissions trading schemes. Speculation by non-liable entities may occur without regard to the underlying objectives of the emissions trading schemes.

Box 2.1: Comparing the CPRS to the EU ETS and the NZ ETS

ETS DESIGN FEATURE	CPRS	EU ETS	NZ ETS
Open-dated scheme	✓	✓	✓
Modified cap	✓	✓	✓
Universal coverage	✗	✗	✗
Unfettered ownership	✓	✓	✓
Unrestricted transfer	✓	✓	✓
Account opening gate	✗*	✗**	✗
Banking	✓	✓	✓
Borrowing	✓	✓	✓
Anti-abuse regime	✓	✗	✗
Market integrity regime	✓*	✗**	✗
Synchronisation rule	✗	✗	✗
Sufficient penalty deterrent	?	✓	✗

Notes: * Limited provisions, further detail to be promulgated in regulations. ** Detailed rules yet to be designed.

The commodification of the right to GHG emissions embodied in EUAs and NZUs is illustrated by design elements such as scheme open-datedness, coverage and thresholds, safety valves and importation of offset credits (CERs, ERUs and RMUs). The review of the features attending to the acquisition, ownership and disposal of the commodity, the ability for the right to emit GHG to be acquired by any irrespective of liability, the freedom to open accounts and buy, borrow, bank and/or sell the rights also demonstrate this commodification.

The design bias in the emissions trading schemes generally does not restrict free transfer of emissions units via a synchronisation rule and an enhanced carbon market integrity regime as proposed by this thesis. The rules in the EU ETS are shifting however.

What lessons are to be learned from contemporary emissions trading schemes? Is commodification without risks? Can the achievement of Australia's emissions reduction be threatened by the language used within the CPRS Bill and within contemporary emissions trading schemes for the linking of those schemes with non-liable entities and secondary markets and the absence of anti-abuse or tying mechanisms? These issues are the focus of chapter four.

CHAPTER 3

CONDITIONED OWNERSHIP PROPOSED IN THE UNITED STATES

1. RELEVANCE OF THE US LEGISLATION

Following the comparative law methodology, this chapter analyses the design features of the *American Climate and Energy Security Act of 2009* (US)(ACES Act)[1] and the discussion draft for the *American Power Act of 2010* (US)(APA)[2] as model provisions suitable for an Australian ETS. Together, the ACES Act/APA would create the right to emit GHG (the US Emissions Allowance (UEA)) in a federal US cap-and-trade ETS (US ETS), and hence are indicative of commodification. This chapter adopts the approach of chapters one and two, and completes the mapping of emissions trading schemes within the thesis.

The APA followed the ACES Act and the introduction of the *Clean Energy Jobs and American Power Act of 2009* (*CEJAPA*)[3] into the Senate on 30 September 2009. The APA was designed to replace CEJAPA (which had stalled in Senate deliberations), and when passed to merge with and subsume the ACES Act[4] (hereafter, ACES Act/APA). An appropriately merged ACES Act/APA therefore presents as the model legislation for a US federal cap-and-trade ETS, originally planned to commence 1 January 2013. The passage of US ETS legislation has been on hold however, following the US mid-term elections in November 2010.[5]

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[1] *American Climate and Energy Security Act of 2009* (US) (H.R. 2544) (*ACES Act*). The ACES Act passed the House of Representatives by 219 votes to 212 on 26 June 2009. The ACES Act proposed a *Global Warming Pollution Reduction Program* (*GWPRP*) as the federal cap-and-trade ETS, to be inserted as a new Title VII to the CAA.

[2] US Senator Joseph Lieberman and US Senator John Kerry, *American Power Act of 2010 (discussion draft)* (12 May 2010), <http://lieberman.senate.gov/index.cfm/issues-legislation/climate-change>. The *American Power Act of 2010* (US)(*APA*) proposed a *Greenhouse Gas Pollution Reduction and Investment Program* (*GHGPRIP*), as the federal cap-and-trade ETS, to be inserted as a new Title VII to the CAA.

[3] The *Bill* for the *Clean Energy Jobs and American Power Act of 2009* (S. 1733) (*CEJAPA*) proposed a *Global Warming Pollution Reduction and Investment Program* (*GWPRIP*), as the federal cap-and-trade ETS, to be inserted as a new Title VII to the CAA.

[4] Accordingly, the ACES Act and the APA must be read together (ACES Act/APA). This chapter will merge the ACES Act and the APA as appropriate, but where their approaches diverge, discuss them separately.

[5] As at 15 May 2011, the start date for a US ETS is unknown. A Californian ETS is scheduled to start 1 January 2012. The prospect of a Californian ETS first became a reality in 2006, with the passage of *Global Warming Solutions Act of 2006 (Cal Health and Safety Code)* (*Assembly Bill 32*) (*AB 32*). AB 32 empowered the California Air Resources Board (*CARB*) to develop a market based mechanism to reduce the State's emissions to 1990 levels by 2020, with mandatory caps beginning in 2012 for significant emissions sources. In late 2010, California's Ballot Proposition 23 contained a provision to suspend AB 32. The proposition was defeated, and on 16 December 2010, CARB promulgated a cap-and-trade ETS. Under the Californian ETS, a limit will be set on sources responsible for 80 per cent of California's

If implemented, the US ETS would dwarf other emissions trading schemes. After China, the US is the largest GHG emitter by volume, and after Australia, the largest per capita.[6] The US ETS would significantly influence the global carbon market. Accordingly its potential size justifies its study.

But the ACES Act/APA also warrants study on another account. Emissions trading schemes have a long history in the US,[7] and US experience influenced the framing of Article 17 of the Kyoto Protocol.[8] Now, the US is leading an increasing global harmonisation of market supervisory and oversight rules in the wake of the GFC,[9] and accordingly, it is appropriate to analyse the features of the ACES Act as a guide to US legislation proposing amendments to the *Federal Power Act* (US)[10] (*Federal Power Act*) and the APA as a guide to US legislation proposing amendments to the *Commodity Exchange Act* (US)[11] (*Commodity Exchange Act*).[12]

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emissions. The regulations (California Cap on Greenhouse Gas Emissions, Title 17, *California Code of Regulations* (Climate Change, Article 5, Sections 95800 to 96022)) will cover 360 businesses representing 600 facilities and is divided into two broad phases – an initial phase beginning in 2012 that will cover major industrial sources and utilities, and a second phase beginning in 2015 that will cover distributors of transportation fuels and natural gas.

[6] United Nations, Framework Convention on Climate Change Subsidiary Body for Implementation, 'National communications and greenhouse gas inventory data from Parties included in Annex I to the Convention; Reports on national greenhouse gas inventory data from Parties included in Annex I to the Convention for the period 1990–2007 and the period 1990–2008', UN Doc. FCCC/SBI/2010/18.

[7] A very early form of emissions trading was first trialled in 1976 by the *US Environment Protection Agency* (*US EPA*) in an attempt to solve the US air quality problem in regions likely to fail ambient air quality standards, without delimiting economic growth. In the 1980s, the US used transferable permit schemes to deal with the elimination of lead from gasoline, and to implement its obligations under the *Vienna Convention for the Protection of the Ozone Layer,* opened for signature 22 March 1985, 1513 UNTS 293 (entered into force 22 September 1988) and the *Montreal Protocol on Substances that Deplete the Ozone Layer,* opened for signature 16 September 1987, 1522 UNTS 3 (entered into force 1 January 1989). The US experience with these programs prompted the use of emissions trading to deal with acid rain. Amendments in 1990 to the US *Clean Air Act* 42 USCS §7651 (Chapter 85, pt IV) capped the output by US power companies of sulphur dioxide (SO_2)and established the Acid Rain Program, an ETS for power generating plants throughout the US to trade the allowances allocated to them to emit SO_2. Under the Acid Rain Program, each allowance to emit SO_2 is fully transferable and authorises the holder to emit 1 t of SO_2.

[8] Hoong N Young, 'An analysis of a global CO_2 emissions trading program' (1998) 14 *Journal of Land Use & Environmental Law* 125. The US is the only Annex B country not to have ratified the Kyoto Protocol.

[9] Post-GFC market oversight is discussed in chapter seven.

[10] 16 USC 12.

[11] 7 USC 1a.

[12] CEJAPA will not be discussed. Like the ACES Act CEJAPA foreshadowed oversight and assurance of carbon markets under a new 'Subtitle D – Carbon Market Assurance,' however CEJAPA did not contain detailed rules for carbon market assurance. Instead, §131 provided as follows:

> It is the sense of the Senate that there shall be a single, integrated carbon market oversight program—
> (1) to provide for effective and comprehensive market oversight and enforcement;
> (2) to lower systemic risk and protect consumers;

The ACES Act and the discussion draft of the APA do not contain a synchronisation rule; however they do make provision for an enhanced carbon market integrity regime.

Some of the amendments proposed by the ACES Act were transitional rules applying until the passage of legislation for market-wide derivatives regulatory reform, now legislated in the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) (*Dodd-Frank Act*).[13]

Critically for this thesis, all of the proposed laws would operate in a manner that would fetter ownership of UEAs.

Accordingly, this chapter analyses the proposed legislative rules, as law indicative of the idea of conditioned ownership of the right to emit GHG. This forms the basis for comparison to the CPRS Bill, Corporations Act and proposed Corporations Regulations in Australia.

2. ACES ACT/APA DESIGN SUPPORTING COMMODIFICATION

The question of coverage of the ACES Act/APA is a critical issue, as it is for the CPRS Bill, the EU ETS and NZ ETS, for coverage bears inextricably upon the interface with non-liable entities.

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(3) to ensure market liquidity and allowance availability;
(4) to enhance the price discovery function of such markets, ensuring that the price for emission allowances and offset credits reflects the marginal cost of abatement;
(5) to prevent excessive speculation that contributes to price volatility, including the establishment of robust aggregate position limits and margin requirements;
(6) to ensure that market mechanisms and associated oversight support the environmental integrity of the program established under title VII of the Clean Air Act (as added by s 101 of this division);
(7) to establish provisions for market transparency that provide authority, resources, and information needed to prevent fraud and manipulation in such markets;
(8) to establish standards for trading as, and operation of, trading facilities;
(9) to ensure a well-functioning, well-regulated market, including a futures market, designed to manage risk and facilitate investment in emission reductions;
(10) to establish clear, professional standards for dealers, traders, and other market participants;
(11) to provide for appropriate criminal and civil penalties; and
(12) to prevent any excessive leverage by market participants that creates risk to the economy.

Had this statement of sentiment by the US Senate been adopted, the final provisions would have resulted in a market integrity regime similar to the APA and the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) (*Dodd-Frank Act*).

[13] Public Law 111-203.

This chapter addresses the specific provisions of the ACES Act/APA which support the conclusion that the UEA is a commodity capable of abstraction from any environmental objective.

2.1. Open-dated scheme

The proposed US ETS would operate indefinitely. The number of emissions allowances (i.e. UEAs) to be issued by the scheme administrator (*Administrator* of the US EPA, equivalent to the Regulator (ACCRA) in Australia) would be enshrined in legislation and set until at least 2050.[14]

The UEA has no end date. An UEA would have an indefinite life, remaining valid until retired by the Administrator.[15]

Like an AEU, EUA and NZU, an UEA would be a fungible bearer instrument.

UEAs would not constitute a property right,[16] yet the nature of an UEA would not change by transfer. Any person who is the owner of the UEA would possess the right inherent in the UEA (crystallised as at the reporting date (12.01 a.m. on 1 April) and thereafter upon retirement) to be covered by the UEA for 1t CO_2-e emissions in the previous calendar year for which the UEA is retired. Thus, for example, an UEA issued in 2013 would be as good for 1t CO_2-e emissions if retired in 2104 for the 2013 calendar year as it would be good for 1t CO_2-e emissions if retired in the 2050 calendar year.[17]

Intertemporal features within the US ETS indicate commodification because, as with other emissions trading schemes, they enable and support a disconnection between the emission of GHG, the ownership and use of the rights created to permit emissions of GHG (for example, UEAs) and the reduction of emissions.

No liable entity within the US ETS (called a 'covered entity') and of course, *no* non-liable entity outside the US ETS, faces any quantitative restriction on emissions.

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[14] APA, proposed §721.
[15] Ibid §722(e) (subject to the power of the Administrator under §725(b) to make regulations for the expiry of UEAs).
[16] Ibid §721(c)(1). §721(c)(2) provides: 'Nothing in this Act or any other provision of law limits or alters the authority of the United States, including the Administrator acting pursuant to statutory authority, to terminate or limit allowances or offset credits.'
[17] Ibid §725. Banking and borrowing is discussed in s 2.12 of this chapter.

Although the ACES Act/APA contain a prohibition on excess emissions,[18] each liable entity would be prohibited only from emitting GHG in excess of the allowable emissions level for the covered entity – this level would be determined by the number of UEAs held as at 12.01 a.m. on 1 April. The excess emissions penalty would be a financial penalty (and would be immediately due and payable to the Administrator) proposed to be set at twice the auction clearing price achieved at the last auction before 1 April.[19]

2.2. Modified capped scheme

Notwithstanding that the numbers of UEAs would be capped by statute for each year from 2013 to 2050 (and beyond at 2050 levels), the US ETS cap would be modified by permitting import of offset credits and through a cost containment reserve (effectively, a safety valve).

Domestic and international offset credits would be substitutable for UEAs.[20] Under the ACES Act/APA a domestic offsets program and an international offsets program would be established and supervised by advisory boards.[21] International offset credits would potentially include CERs, ERUs and credits from forestry projects (called REDD+ programs). However, use of offsets credits and their substitution by covered entities would be subject to limits: for each liable entity no more than 25 per cent of its liability could be satisfied with offset credits.[22] For the US ETS, the total emissions that could be so offset would not exceed 2 000 000 000t CO_2-e per annum.[23]

Liable entities would be able to meet up to 15 per cent of their liability by purchasing UEAs from the cost containment reserve. The ACES Act/APA would require the Administrator to deposit 4 000 000 000 UEAs into the cost containment reserve at the commencement of the US ETS, as outlined in Table 3.1.[24]The UEAs in the cost containment reserve would be made available for purchase by covered entities at a fixed

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[18] Ibid §723.
[19] Ibid §723(b). As in other emissions trading schemes, the excess emissions penalty does not diminish liability, and is required to be made good in the calendar year of retirement, or such longer period allowed by the Administrator, or by deduction from UEAs held by a liable entity.
[20] Ibid §722(d).
[21] Ibid pt D and pt E.
[22] Ibid §722. During a transitional phase, international offset credits would be useable in lieu of UEAs at the rate of 1.25 times per t CO_2-e (domestic offset credits would substitute one for one).
[23] Ibid.
[24] Ibid §726.

price, starting at US$25 in 2013 and increasing each year thereafter at the rate of five per cent plus inflation.[25] Liable entities would be required to retire UEAs purchased from the cost containment reserve and would not be able to bank them for future use.[26]

Table 3.1: The cost containment reserve at commencement of the US ETS

PERCENTAGE AMOUNT OF UEAs	VINTAGE OF UEAs
1.5 per cent	2013 to 2021
2.5 per cent	2022 to 2029
5 per cent	2030 to 2050
Unsold EAUs	Every auction

The US ETS cost containment reserve would be more restrictive than the safety valve proposed for Australia (both in the CPRS Bill and under the carbon price framework). The cost containment reserve in the US ETS would ease the quantitative restriction on emissions, and it is notable that the safety valve price could act as a price signal if US$25 is not out-of-market.

2.3. Coverage and thresholds

The GHG to be covered by the US ETS (subject to certain determinations within the power of the Administrator and subject to petition to designate GHGs) include the bundle of six Kyoto protocol gases, plus *Nitrogen trifluoride* (NF_3).[27]

The ACES Act/APA prohibition on excess GHG emissions attaches to a 'covered entity.'[28] The term 'covered entity' is a defined term, and means:

- any electricity source;
- any refined product provider (the ACES Act/APA liability attaches in respect of the GHG emissions from the refined products, assuming no CCS);
- industrial gas producers and importers;
- geological sequestration sites;
- any industrial stationary source (including groups and affiliates) that produces or imports, for sale or distribution in commerce, in bulk or in products, 25kt of

[25] Ibid §726(b)(3).
[26] Ibid §726(d)-(e).
[27] Ibid §711.
[28] Ibid §700 (definitions) and §722.

CO_2-e per annum of fossil fuel-based CO_2, N_2O, PFCs, SF_6 or other designated GHGs or combination thereof;

- any stationary source that has emitted 25kt per annum or more of NF_3;
- any stationary sources in one of 24 designated industrial sectors and any stationary sources producing designated products in the chemical or petrochemical sectors;
- any fossil-fuel fired combustion device not elsewhere covered; and
- any natural gas distributor delivering 460 000 000 cubic feet of natural gas per annum or more.

The thresholds in the ACES Act/APA limit coverage and reinforce commodification. Generally, the threshold for inclusion would be the emission of 25kt of CO_2-e emissions, but the Administrator may reduce this threshold to not less than 10 000t.[29]

The ACES Act/APA would also provide that stationary sources that are covered entities would be required to apply for a GHG permit from the regulator. A condition of the GHG permit would require the owner or operator of a covered facility to hold 'allowances or offset credits in a quantity that is at least equal to the total quantity of carbon dioxide equivalents for the combined greenhouse gas emissions of the covered entity.'[30] This is a requirement which this thesis proposes as part of Registry account opening in the Australian ETS.

2.4. Commensuration

The 'allowance' would be created as the commodity that would be the means for covered entities to cover GHG emissions (unitised to 1 t CO_2-e) and retire their liabilities. The allowance includes UEAs, 'compensatory allowances' (allowances issued free for certain activities, such as destruction of synthetic GHG) and (domestic and international) offset credits, and would be considered commensurate.

The GHGs covered by the US ETS mirror other emissions trading schemes but are nevertheless a legislative construct of the ACES Act/APA. In order to align the US ETS with other emissions trading schemes, the ACES Act/APA uses the metric tonne as the unit of measurement. Further, the ACES Act/APA makes each of the GHG equal

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[29] Ibid §722(g). The US ETS was expected to cover approximately 7 500 emitters.
[30] Ibid §727.

through GWP.[31]

As with the CPRS Bill, the EU ETS and the NZ ETS, the equivalence treatment of actual and notional emissions reductions could result in a mismatch between the rules in the US ETS that apply to UEAs issued by the Administrator at auction, those acquired free under compensatory programs, and the rules in the Kyoto Protocol and CDM Rulebook for CDM projects.

As with the CPRS, these mismatches would institutionalise differences, notwithstanding the apparent equivalences. Uncertainty and arbitrage opportunities would be in-built into the US ETS and therefore into the US carbon market.

2.5. Ownership of UEAs

Notwithstanding that there is no property right in the UEA, the UEA is clearly a commodity – viz, a product or an article of trade or commerce – and like the AEU, the EUA and the NZU, the trading features (discussed in s 2.6 of this chapter) and the following distinguishing rights attaching to ownership, illustrate the commodification.

As noted in s 3.1 of this chapter, participation in the carbon market created by the US ETS would be limited to 'compliance entities' and 'regulated greenhouse gas market participants.' This is a critical distinction from other emissions trading schemes (which, as noted in chapter two, the EU ETS is following a route by limiting participation in the EU ETS to operators and authorised investment firms). This distinction is overtaken by the synchronisation rule proposed by this thesis (see chapter five).

An owner of an UEA may hold it, retire it, or sell it. The right to emit GHG is inherent in the UEA, and is liberated by retirement.

Ownership of an UEA is not tied to any obligation by the holder of the UEA to reduce GHG emissions, at any time or in any place.

Ownership of an UEA is not tied to any obligation to use the UEA to acquit the GHG emissions of the holder, at any time or in any place.

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[31] ACES Act/APA, §712 specifies the carbon dioxide equivalent (metric tons) as 1 GPW per 1 t CO_2-e. Unlike the CPRS and NGER Reporting Regulations the GWP for any GHG not listed in the ACES Act/APA is to be determined using the methodology of Assessment Report 4 of the Intergovernmental Panel on Climate Change (2007).

As a general rule, an UEA of a later vintage may not be used to satisfy a reporting obligation of an earlier period (except where a borrowing is permitted, discussed in s 2.12 of this chapter). Thus, for example, a liability for the 2013 calendar year could not be satisfied by retiring an UEA to be issued in 2020. As noted in s 2.1 of this chapter, an UEA of an earlier vintage may always be used to satisfy a reporting obligation of a later period (that is, UEAs may be banked (discussed below)).

As a commodity, the UEA would possess a unique identification number,[32] marked with the vintage year.

Ownership of UEAs would not be unfettered. Only compliance entities and 'regulated greenhouse gas market participants' would be able to deal with 'greenhouse gas instruments.'

Subject to the Commodity Exchange Act restrictions, UEAs may be transferred without restriction.[33]

UEAs may be acquired from the Administrator in auctions (the primary market), on a public exchange or by private treaty. An emissions trading market (the secondary market) would emerge for buying and selling UEAs in the US (and it would be expected that a derivatives market would develop too). These markets however would be subject to restrictions to be imposed by the Commodities Exchange Act.

2.6. Trading of UEAs

The ACES Act proposed amendments to the Federal Power Act to limit tradability of 'regulated allowances' to 'covered entities.'[34]

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[32] Ibid §721(b).
[33] Ibid §724.
[34] A precedent for restricting an ETS to liable entities and selected financial institutions is the Japanese Voluntary Emissions Trading Scheme (*JVETS*). JVETS launched in March 2005. Companies/facilities were invited to participate voluntarily by pledging emissions reduction targets and if chosen, received emissions allowances (*JPAs*) from the Japanese Government (and a subsidy of up to 33 per cent of the cost of new installations to reduce emissions). Participants could trade JPAs through an ETS as a flexibility mechanism to achieve their pledged emission reduction. The Japanese Government selected 32 target facilities from applicants based on the cost effectiveness of the GHG reduction activity. Pledges from these 32 companies amounted to emissions reductions of 21 per cent below 2004 emissions. Additionally, the Japanese Government selected eight 'trading entities' that were permitted to trade in the ETS, but were not otherwise eligible for subsidies.

The APA proposed amendments to the Commodities Exchange Act[35] that would operate to limit tradability of 'greenhouse gas instruments' to 'compliance entities' and 'regulated greenhouse gas market participants.'[36]

In the US ETS, a compliance entity would be any entity subject to §722 of the CAA[37] (i.e. covered entities). Trading in UEAs would be restricted. Covered entities would compete with other covered entities and with regulated GHG market participants for UEAs. Like AEUs, the right to emit GHG inherent in the UEA would be subjected to demand, making the UEA like any commodity.

Trading in UEAs would be an activity independent of auctioning by the Administrator. All covered entities would be free to decide whether to acquire UEAs from the Administrator through auction, from sellers in the carbon market, or off-market by private treaty. Similar to AEUs, trading in UEAs would be an activity independent of retiring UEAs.[38]

2.7. Speculation in UEAs

Senators Lieberman and Kerry noted that the APA 'is not a plan that enriches Wall Street speculators.'[39] They suggested that their 'carbon market structure eliminates the possibility of manipulation, which will mean a secure, well-functioning market system.'

Proposed subtitle D of the ACES Act, 'Carbon Market Assurance,' and proposed subtitle E of the APA, ,'Regulation of Greenhouse Gas Markets,' respectively proposed broad amendments to the Federal Power Act and Commodity Exchange Act to restrict trading in the spot and futures markets. Existing provisions in the Commodity Exchange Act dealing with swap transactions, short selling, fraud and manipulation would be extended by the APA to greenhouse gas instruments. The term 'greenhouse gas instrument' would be defined to mean a 'greenhouse gas allowance' – an UEA,

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[35] Commodity Exchange Act proposed §4(e).
[36] Hereinafter 'regulated GHG market participants.' These amendments are discussed in this chapter at ss 3.1, 3.5 and 3.6.2.
[37] Ibid §1a(8).
[38] An UEA may only be retired once, and upon retirement, is cancelled by the Administrator.
[39] US Senator Lieberman, *American Power Act of 2010 (Short Summary)* (12 May 2010), <http://lieberman.senate.gov/assets/pdf/APA_sum.pdf>.

compensatory allowance, and domestic and international offset allowances – and any other instrument designated a greenhouse gas instrument by the Administrator.[40]

A new provision, §4a titled 'Excessive Speculation' was proposed by the APA for the setting of trading limits. New §4(2) would provide:

> (A) IN GENERAL.—Consistent with the purposes and standards described in paragraph (1), the Commission shall, from time to time, after due notice and opportunity for hearing, by rule, regulation, or order, establish limits on the quantity of trading that may be done in greenhouse gas instruments, or the quantity of the instruments that may be owned, held, or traded, as the Commission, in consultation with the Administrator of the Environmental Protection Agency and the heads of other appropriate Federal agencies, determines to be necessary and in the public interest.

If covered entities were to acquire and hold UEAs for retirement, then it might be expected that new §4(2) of the Commodity Exchange Act would affect the initial market depth of the US ETS, and hence price. Implicitly, the ACES Act/APA acknowledges that price would be set by covered entities and the regulated greenhouse gas participants. This contrasts with the CPRS where the price would be set by liable entities in competition with non-liable entities, financial institutions and other investors and speculators free to participate in the Australian carbon market.

In the US ETS, financial intermediaries would not be covered entities.

Non-liable entities – including regulated GHG market participants – would not face US ETS obligations.

2.8. Acquisition in primary markets (auctions)

The UEA, being a US Government created right, would be under the control of the Administrator and would be offered for sale by the Administrator in auctions (the primary market).[41] Four regular uniform price auctions would be held each year for a portion of current vintage UEAs and vintages for the four succeeding years.

In contrast to the CPRS, and consistent with conditioning ownership of UEAs, participation in the auction process would be limited to covered entities and regulated GHG market participants.[42]

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[40] Commodity Exchange Act §1a(24), (26).
[41] APA, §790.
[42] Ibid §790(b)(4).

Like the CPRS, it is proposed that participants would need to demonstrate creditworthiness.[43]

The ACES Act/APA also proposed (inter alia)[44] three other auction features designed to condition behaviour in the primary market:

- each bidder in an auction would be required to disclose beneficial ownership if any other person was benefiting from the participation of the bidder in the auction;[45]
- position limits would be set as necessary by the Administrator to 'prevent manipulation of prices;'[46] and
- the identity of winning bidders, and the quantity of allowances obtained by each winning bidder and auction clearing price, would be disclosed.[47]

The Administrator would also be empowered to change the auction design in the US ETS if an alternative auction design would be more effective 'taking into account factors including …. price discovery, promotion of liquid secondary markets, risks of collusion or manipulation.'[48]

Every two years the Comptroller General of the United States would be tasked with reviewing the US ETS.[49]

2.9. Acquisition in secondary markets (transfer of UEAs)

Subject to market constraints, it was intended that an UEA would be transferable without restriction.[50] §724 of the APA provided:

> Except as otherwise provided in this title or the Commodity Exchange Act (7 USC 1 et seq.), the lawful holder of an emission allowance, compensatory allowance, or offset credit may, without restriction, sell, exchange, transfer, hold for compliance in accordance with s 722, or request that the Administrator retire the emission allowance, compensatory allowance, or offset credit.

[43] Ibid §790(b)(4)(B). See s 1.8 of chapter one.
[44] A reserve auction price would be enshrined in the legislation (§790(d)), and the Administrator would be authorised to auction allowances on consignment (§791).
[45] APA, §790(b)(5).
[46] Ibid §790(b)(6).
[47] Ibid §790(b)(7).
[48] Ibid §790(c).
[49] Ibid §792.
[50] Ibid §724.

Amendments proposed to the Federal Power Act and the Commodity Exchange Act by the ACES Act/APA, combined with the provisions of the Dodd-Frank Act, would prescribe other changes affecting trading. These are discussed in ss 3.1 and 3.5 of this chapter.

2.10. Interface with derivatives markets

Conditioning participation in the primary and secondary markets of the US ETS would not, of itself, address the interface of primary, secondary and derivatives markets.

2.11. International linking with other ETS

The US ETS would link the emission reduction efforts of the US to the UNFCCC[51] and the Kyoto Protocol[52] through the importation of international offset credits, subject to quantity limitation and subject to allowances from foreign emissions reduction programs (other than projects based on the destruction of hydrofluorocarbons) meeting specified requirements.[53]

In addition to CERs, ERUs and credits arising under REDD+ programs, AAUs under the Kyoto Protocol could be accepted for compliance under the ACES Act/APA, subject to certification that the international emission allowance had not previously been used to comply with any other GHG regulatory program.[54]

2.12. Banking and borrowing

UEAs (other than UEAs purchased from the cost containment reserve) may be banked without limitation.

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[51] *United Nations Framework Convention on Climate Change,* opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994).
[52] *Kyoto Protocol,* opened for signature 16 March 1998, UN Doc. FCCC/CP/1997/7/Add.1, 10 December 1997 [being the Report of the Conference of the Parties on its third session, held at Kyoto from 1 to 11 December 1997] (entered into force 16 February 2005).
[53] These requirements included that the emissions reductions be additional, measurable, verifiable, permanent and enforceable, and included the requirement of comparable stringency (this includes standardized methodologies, including for accounting for, and mitigating, potential leakage, reversals and crediting periods, across all project types.
[54] APA, §728(c)(1) and pt E 'Offset Program for International Emission Reductions.' Subject to Presidential determination, allowances may also be allocated under §797 to one or more funds which address key international priorities in allocation decisions to substantially reduce the risks of climate change.

A further indication of commodification is that covered entities would be able to satisfy a retirement obligation by borrowing a future UEA vintage held by the liable entity. However, the scope to borrow would be limited, as follows:

- borrowing would be permitted without interest and without limitation for the immediately preceding calendar year; and
- borrowing from vintages of one up to five years after the calendar year would be limited to 15 per cent of the emissions of the covered entity, with an interest component of eight per cent per annum payable in UEAs.

2.13. Emissions-intensive trade-exposed industry assistance

Like the CPRS, and the EU ETS from 1 January 2013, the US ETS would make compensatory provision for EITE assistance. The ACES Act/APA proposes that from 2016, energy-intensive and trade-exposed industries would receive allowances to offset both their direct and indirect compliance costs.

3. ACES ACT/APA DESIGN RESTRICTING COMMODIFICATION

The amendments proposed to the Federal Power Act by the ACES Act and the Commodities Exchange Act by the APA each sought to regulate desirable conduct in relation to holding and trading of UEAs and substitutes.

3.1. Limits on transfer

The substantive control in the APA on the trading of an UEA would be the ownership restrictions imposed by proposed new provisions for the Commodity Exchange Act. New §4(e) of the Commodity Exchange Act would specify the requirements for trading of greenhouse gas instruments. Combined, the APA and the Commodity Exchange Act would limit the primary and secondary market to compliance entities and regulated GHG participants designated by the regulator (discussed in this chapter at s 3.6.2).

Restriction on who may acquire UEAs in the primary market (i.e. at auctions) and the restriction on trading in the secondary market would not automatically deter all non-liable entities (i.e. non-compliance entities and non-regulated GHG market participants) from the markets.

3.2. Limitations to UEAs

As noted, the ACES Act/APA proposed that UEAs would be available for purchase from the cost containment reserve.

However, UEAs in the cost containment reserve would only be offered for sale to covered entities.[55] They would only be retired in the calendar year during which they are sold, and therefore they may not be banked.[56]

3.3. Penalties

As in the CPRS, the EU ETS and the NZ ETS, the key provision of the US ETS that would influence the behaviour of covered entities would be §723, which provides for exposure to penalties (an excess emissions penalty) if a covered entity does not retire sufficient allowances to cover emissions, and imposes a make-good for under retirement of allowances.

A penalty for non-compliance – the excess emissions penalty – would be imposed on covered entities if they fail to retire allowances units by the retirement date of 1 April. The excess emissions penalty would be calculated on the amount of tonnes of GHG emissions not covered by allowances at the rate per tonne of two times the auction clearing price in the last auction before 1 April for UEAs of the vintage year identical to the calendar year of non-compliance. The US ETS excess emissions penalty would be higher than the cost of non-compliance in Australia (recall, the unit shortfall penalty in Australia would be the higher of 110 per cent of the average benchmark auction price achieved for AEUs in the eligible financial year, and 110 per cent of the fixed price AEU).

The excess emissions penalty for non-compliance would not relieve the covered entity from the obligation to retire allowances to cover GHG emissions. The covered entity would be required to make good in the calendar year of non-compliance. As with the CPRS, the US ETS disconnects the obligation to retire allowances from emissions reductions, reflecting instead the intertemporal and fungible nature of UEAs.

Non-compliance penalties would also be imposed under §7420 of the CAA, if a stationary source is not in compliance with an emission limitation, emission standard of performance or other promulgated requirements under the CAA generally.

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[55] Ibid §726.
[56] Ibid §726(d)-(e).

None of the non-compliance and make-good provisions would apply to a non-liable entity.

3.4. Enforcement provisions

The ACES Act/APA would introduce the US ETS as a new Title VII to the CAA. Accordingly, the Administrator's existing enforcement powers within the CAA would apply to the US ETS. These powers include (inter alia):

- prescribing regulations as are necessary to carry out the Administrator's functions under the CAA;[57]
- if an emission source is presenting an 'imminent and substantial endangerment to public health or welfare, or the environment,' exercising emergency powers over the person responsible for the emissions. §7603 provides:

> Notwithstanding any other provision of this chapter, the Administrator, upon receipt of evidence that a pollution source or combination of sources (including moving sources) is presenting an imminent and substantial endangerment to public health or welfare, or the environment, may … take such other action as may be necessary.[58]

- entering sources[59] and gathering information,[60] and requiring records to be maintained by covered entities and made available to the Administrator;[61]
- inspecting, investigating and monitoring emissions sources;[62] and
- launching administrative enforcement proceedings against covered entities.[63]

For example, §7477 provides:

> The Administrator shall, and a State may, take such measures, including issuance of an order, or seeking injunctive relief, as necessary to prevent the construction or modification of a major emitting facility which does not conform to the requirements of this part, or which is proposed to be constructed in any area designated pursuant to s 7407 (d) of this title as

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[57] CAA, §7601.
[58] Relying on these powers, and following direction by the Supreme Court in *Massachusetts v Environmental Protection Agency* (2007) 549 US 497, the US EPA released an 'Endangerment and Cause or Contribute Findings for Greenhouse Gases' finding that GHG in the atmosphere endanger the public health and welfare of current and future generations: United States Environment Protection Authority, 'Endangerment and Cause or Contribute Findings for Greenhouse Gases' (15 December 2009) EPA-HQ-OAR-2009-0171; FRL–9091–8, RIN 2060–ZA14. This finding survived a series of legal challenges in 2010 and pursuant to it the US EPA has promulgated rules for GHG monitoring and reporting.
[59] CAA, §7414.
[60] Ibid §7521(b)(4), §7545(c)(3).
[61] Ibid §7414.
[62] Ibid.
[63] Ibid §7413.

attainment or unclassifiable and which is not subject to an implementation plan which meets the requirements of this part.

3.5. Other Regulator discretions

Unlike the CPRS, the proposed US ETS does not make provision for the full range of anti-abuse type behaviour that might be expected. For example, it does not contain an anti-avoidance rule, and the only provision directed to monopoly conduct in the ACES Act/APA is one empowering the Administrator to determine purchase limits in the primary market. Notwithstanding, the proposed amendments to the Commodity Exchange Act, combined with the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) cover a wide spectrum of potential abuses.

A. Anti-avoidance rules

There is no specific anti-avoidance rule in the US ETS similar to s 23 of the proposed CPRS Bill.

B. Anti-monopoly rules

Generally, anti-competitive conduct in the US is addressed in anti-trust law, codified[64] in Title 15 of the US Code. For example, all contracts and monopolies, combinations and trusts in restraint of trade are made illegal.[65]

There is no rule in the ACES Act/APA preventing monopoly conduct by entities (covered and non-covered), save that in auctions, the Administrator would be entitled to set purchase limits as necessary to prevent manipulation of prices.[66]

C. Anti-abuse rules

Unlike the CPRS, the EU ETS and the NZ ETS, participation in the US carbon market and liability under the US ETS would be linked concepts. A carbon market anti-abuse rule would be incorporated by reference to the CAA by the APA by specifying, as appropriate, that the US ETS provisions would apply ‘subject to the Commodity Exchange Act.’

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[64] For an account of the early history of anti-trust legislation in the US, see J D Forrest, 'Anti-Monopoly Legislation in the United States' (1896) 1 *The American Journal of Sociology* 411; for a most recent account, see David J Gerber, *Global Competition: Law, Markets, and Globalization* (Oxford University Press, 2010) chapter 5.
[65] *Clayton Antitrust Act of 1914* (US), 15 USC (*Clayton Act*) §1.
[66] APA, §790.

The chapter now turns to the market integrity regime proposed for the Federal Power Act by the ACES Act, for the Commodity Exchange Act by the APA, and as enacted by the Dodd-Frank Act.

3.6. Market integrity regime

Market manipulation has long been prohibited in the US under § 9(a)(2) of the *Securities Exchange Act of 1934*[67] (see Box 7.2 in chapter seven).

Following the GFC, and as a regulatory response to observed market behaviour, proposals for a newer and more robust market integrity regime were included in the ACES Act and APA.

The essence of the proposals was a move to a closed US ETS, limiting market participation to liable entities and other regulated participants only.

This thesis asserts that these provisions present as a model for an enhanced carbon market integrity regime in an Australian ETS (see chapter five).

3.6.1. ACES Act amendments for *Federal Power Act*

Subtitle D of the ACES Act proposed a new 'Part IV – Carbon Market Assurance' for the Federal Power Act.

These oversight and assurance provisions would apply to 'covered entities,'[68] being the entities liable to retire emissions under the US ETS, and in respect of 'regulated instruments,' being both a 'regulated allowance' and a 'regulated allowance derivative.'[69] Regulated allowances would be emissions allowances, offset credits, compensatory allowances and renewable electricity credits.[70]

Proposed §401(b) would direct the 'Commission'[71] to promulgate regulations for the establishment, operation, and oversight of regulated allowances that shall:

- provide for effective and comprehensive market oversight;
- prohibit fraud, market manipulation, and excess speculation, and provide measures to limit unreasonable fluctuation in the prices of regulated allowances;

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[67] 15 USC chapter 2B §78a.
[68] Federal Power Act proposed §401(a)(2).
[69] Ibid.
[70] Ibid.
[71] Ibid §796(14). The Federal Power Commission would be the regulator of the US ETS.

- facilitate compliance with title VII of 16 the CAA by covered entities;
- ensure market transparency and recordkeeping deemed necessary and appropriate by the Commission to provide for efficient price discovery, prevention of fraud, market manipulation, and excess speculation, and compliance with title VII of the CAA and s 610 of the *Public Utility Regulatory Policies Act of 1978* (US) (*PURPA*);
- as necessary, ensure that position limitations for individual market participants are established with respect to each class of regulated allowances;
- as necessary, ensure that margin requirements are established for each class of regulated allowances;
- provide for the formation and operation of a fair, orderly and liquid national market system that allows for the best execution in the trading of regulated allowances;
- limit or eliminate counterparty risks, market power concentration risks, and other risks associated with trading regulated allowances outside of trading facilities;
- establish standards for qualification as, and operation of, trading facilities for regulated allowances;
- establish standards for qualification as, and operation of, clearing organizations for trading facilities for regulated allowances; and
- include such other requirements as necessary to preserve market integrity and facilitate compliance with title VII of the CAA and s 610 of the PURPA.[72]

These proposed §401(b) rules would be justified as public interest intervention to maintain orderly and competitive markets (see chapter six).

§401(b)(3)(A) provides that if an entity is found (after notice and an opportunity for a hearing) to have violated any market integrity rule, then that entity would be prohibited from trading, including having its relevant registrations suspended for a period up to 6 months, and would be fined a civil penalty not exceeding US$1 000 000 per day per violation for the duration of the violation. Additionally, the entity would be ordered to

[72] Ibid §401(b)(2).

disgorge unjust profits and to make restitution to entities that are harmed by the violation.[73]

Further, any trading facility or clearing house that is determined to have violated the rules would have its registration suspended for up to six months by the regulator.[74]

The regulator would also be armed with significant market intervention powers. If the regulator determined that an entity may be violating, may have violated, or may be about to violate the market integrity rules, and the regulator finds that the alleged or threatened violation or its continuance is 'likely to result in significant harm to covered entities or market participants, or significant harm to the public interest' then the regulator may temporarily order the entity to 'cease and desist' and to take such action as is necessary to prevent the violation or threatened violation or the harm(s),[75] if significant dissipation or conversion of assets would occur, to prevent such dissipation or conversion.[76] The cease and desist order could be given without notice and a hearing if impracticable or contrary to the public interest,[77] and once served, would become effective and remain effective until proceedings were completed.[78] Only 10 days was proposed to be allowed in which to commence proceedings for review.[79]

Persons convicted of fraud or knowingly making false or misleading statements would be fined up to US$25 000 000 (for individuals, up to US$5 000 000), and/or imprisoned for up to 20 years.[80] Such persons would be prohibited from holding or trading regulated allowances for up to five years. However, by way of exception, if the person is a covered entity, the person instead would be allowed to hold sufficient allowances to meet its compliance obligations.[81]

An annual report would be required to be made to the President and nominated Congress committees about market functioning, including:

- the status of, and trends in, the markets, including prices, trading volumes,

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[73] Ibid §401(b)(3)(A)(iv).
[74] Ibid §401(b)(3)(B).
[75] Ibid §401(b)(3)(C).
[76] Ibid §401(b)(3)(D)(i).
[77] Ibid §401(b)(3)(C)(ii).
[78] Ibid §401(b)(3)(C)(iii).
[79] Ibid §401(b)(3)(E)(iii)(II).
[80] 18 USC 47, §1041.
[81] Federal Power Act §401(d).

transaction types, and trading channels and mechanisms;

- spikes, collapses, and volatility in prices of regulated instruments, and the causes therefor;
- the relationship between the market for regulated allowances and allowance derivatives, and the spot and futures markets for energy commodities, including electricity;
- the economic effects of the markets, including to macro- and micro-economic effects of unexpected significant increases and decreases in the price of regulated instruments;
- any changes in the roles, activities, or strategies of various market participants;
- regional, industrial, and consumer responses to the markets, and energy investment responses to the markets; and
- any other issue related to the markets that the Commission and the US *Commodity Futures Trading Commission* (*CFTC*) deem appropriate.[82]

The ACES Act also required the establishment of an interagency working group on carbon market oversight to make specific recommendations to the Commodity Futures Trading Commission for regulations covering the derivatives market.[83] Transitional amendments were proposed for the Commodity Exchange Act to make specific provision for 'energy commodities,' namely coal, oil, electricity, natural gas, and other energy substances, to be subject to derivatives and OTC and swap market supervision. Entities would be regulated by limits to be placed on the aggregate number of positions which may be held in any month across supervised markets, and to limit speculation in indices. Further, under transitional rules, the regulator would be granted power to exempt 'bona fide hedging contracts.' Such contracts were narrowly defined as a transaction or position that:

- represents a substitute for transactions made or to be made or positions taken or to be taken at a later time in a physical marketing channel;
- is economically appropriate to the reduction of risks in the conduct and management of a commercial enterprise; and
- arises from the potential change in the value of—

[82] Ibid §401(f).
[83] Ibid §401(c).

- assets that a person owns, produces, manufactures, processes, or merchandises or anticipates owning, producing, manufacturing, processing, or merchandising;
    - liabilities that a person owns or anticipates incurring; or
    - services that a person provides, purchases, or anticipates providing or purchasing; or
- reduces risks attendant to a position resulting from a transaction that—
    - was executed pursuant to s (d), (g), (h)(1), or (h)(2) of [USC Title 7, 6a(c)] s 2, or an exemption issued by the Commission by rule, regulation or order; and
    - was executed opposite a counterparty for which the transaction would qualify as a bona fide hedging transaction pursuant to paragraph (2)(A) of this s.[84]

Provision would be made for the clearance of derivatives transactions through a recognised derivatives clearing house or regulated entity,[85] and for the publication by such clearing houses of extensive market information on a daily basis. Additionally, index traders, swaps dealers and funds would be required to make detailed disclosure and disaggregation of their positions in contracts traded in the various markets, including OTC and swaps markets, and in derivatives transaction execution facilities.[86] The identity of any person holding a position in excess of the prescribed limit would also have to be disclosed. A range of further amendments of the Commodity Exchange Act were proposed, including limiting the eligibility to purchase a credit default swap, until the passage of legislation that included market-wide derivatives regulatory reform (now the Dodd-Frank Act).

3.6.2. APA amendments for *Commodity Exchange Act*

Subtitle E of the APA provided for regulation of 'greenhouse gas markets' by proposing amendments to the Commodity Exchange Act. The CFTC would be the regulator of the US ETS.

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[84] Ibid §351(f).
[85] Ibid §354(f).
[86] Ibid §351(h).

The basic rule proposed a new s (e) to s 4 of the Commodity Exchange Act that would make it unlawful:

> for any person to offer to enter into, execute, confirm the execution of, or conduct an office or a business for the purpose of soliciting or accepting an order for, or otherwise dealing in, an agreement, contract, or transaction in a greenhouse gas instrument, unless the person –
>
> (A) is either a regulated GHG market participant or a compliance entity;
>
> (B) is registered with the Commission;
>
> (C) conducts the trading of the person on or subject to the rules of a greenhouse gas instrument trading organization;
>
> (D) conducts activities of the person in compliance with any rule, regulation, or order governing greenhouse gas short sales promulgated by the Commission …; and
>
> (E) clears the trades of the person through a greenhouse gas clearing organization.

The prohibition in proposed §4(e)(1) would limit activity of both a vendor and purchaser. In order to pass the test of lawfulness, all parties to the transaction must be either a compliance entity or a regulated GHG market participant (each meeting the other conditions in the section) and this must be the case in all phases of the transaction (from being in business, to soliciting and dealing, to offer and to contract).

A compliance entity would be any entity subject to §702 of the CAA (a liable entity, or a designated affiliate of such entity).

A regulated GHG market participant would be defined as:

> a person other than a compliance entity as specified in regulations promulgated by the Commission, in conjunction with the Administrator of the Environmental Protection Agency and the Secretary of the Treasury, based on an assessment of the market structure and a determination that additional participants are necessary for a liquid and well-functioning market that would ensure not more than a reasonable rate of economic return.[87]

A greenhouse gas instrument would be a GHG allowance (i.e. an UEA) and any other type of instrument so designated by the US EPA.

Notably, the rule would require all five of the conditions in §4(e) to be satisfied. Accordingly, the Commission would have the opportunity to further limit the US carbon market, through:

- the process of registration of a compliance entity; and

[87] APA, §2401(7), inserting new §1a(37) into the Commodity Exchange Act.

- the process of registration of a regulated GHG market participant; and
- the process of registration of a greenhouse gas instrument trading organization; and
- the setting of rules, regulations, and orders governing greenhouse gas short sales.

Regulated GHG market participants would not be liable entities, and therefore they would not face any compliance obligation under the APA.

The APA aimed to set a significant hurdle for the entry of regulated GHG market participants into the US carbon market.

Regulated GHG market participants would not automatically exist. They would be created pursuant to regulations. Financial intermediaries therefore would have no automatic entry into the US carbon market.

Both compliance entities and regulated GHG market participants would be required to be registered with the CFTC.[88] Such registration would involve a continuous reporting obligation and agreement to conform to prescribed rules and business conduct standards, addressing in particular:

> (1) the prevention of fraud, manipulation, and other abusive practices involving greenhouse gas instruments;
> (2) the diligent supervision of the business of the greenhouse gas market participant or compliance entity;
> (3) the adherence to all applicable position limits;
> (4) greenhouse gas allowance short sales;
> (5) recordkeeping, reporting, and disclosure requirements; and
> (6) such other matters as the Commission shall determine to be necessary or appropriate.[89]

In addition to registration, the tests for entry into the market for non-liable entities would require that the non-liable entities be necessary for liquidity *and* for a well-functioning market.

As noted, the US ETS would dwarf existing carbon markets. Its sheer size alone would assist its liquidity. The estimated number of UEAs to be auctioned or issued free in the

[88] Commodity Exchange Act new §4r. Any statutory disqualification would automatically debar a compliance entity or regulated GHG market participant from trading in UEAs.
[89] Ibid §4r(b)

US ETS would be in the vicinity of 7 000 000 000 per annum.[90] In a market of these numbers, and with an estimated 7 500 emitters,[91] arguments about liquidity are not strong.

In addition to liquidity, the entrance of non-liable entities into the market must contribute to a well-functioning market, implying that the market would not be functioning properly without them. The use of the conjunction 'and' in the test makes it clear that functionality is a concept separate from liquidity. However, the APA amendments do not define the parameters of a 'well-functioning market.'[92]

The test for entry would also require that the entry of non-liable entities would ensure that no more than a reasonable economic return is earned. The reasonable economic return could be to the market as a whole (thereby permitting winners and losers) or it could mean that each participant in the market was entitled to earn such a return. Investors, financial intermediaries and speculators would be limited to earning a reasonable economic return.

The jurisdiction of the CFTC would be enlarged by the APA.

A. Futures trading restricted

Existing Commodity Exchange Act futures trading restrictions including against wash sales and accommodation trades would be extended to UEAs, without exemption.[93]

B. Swap transactions confined

Existing swap transactions restrictions in the Commodity Exchange Act would be extended to UEAs, without exemption.[94]

C. Fraud prohibited

Existing prohibition on fraud by the Commodity Exchange Act would be extended to UEAs, without exemption.[95]

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[90] Based on total US GHG emissions of 7 150 teragrams of CO_2-e in 2007: United States Department of State, 'US Climate Action Report 2010' (Report, United States Department of State, Global Publishing Services, June 2010) 5. As noted, up to 2 000 000 000 offset credits may also be imported.

[91] US Senator Lieberman, *US Senator Lieberman, American Power Act of 2010 (Short Summary)* (12 May 2010) <http://lieberman.senate.gov/assets/pdf/APA_sum.pdf> 5.

[92] The concept of fair and orderly markets is discussed further in chapter seven.

[93] APA, §2402.

[94] Ibid §2403.

§6b(a)(2) of the Commodity Exchange Act makes it unlawful, in essence:

> (A) to cheat or defraud or attempt to cheat or defraud the other person;
> (B) willfully to make or cause to be made to the other person any false report or statement or willfully to enter or cause to be entered for the other person any false record;
> (C) willfully to deceive or attempt to deceive the other person by any means whatsoever in regard to any order or contract or the disposition or execution of any order or contract, or in regard to any act of agency performed, with respect to any order or contract for or, …, with the other person; or
> (D)
> (i) to bucket an order …; or
> (ii) to fill an order by offset against the order or orders of any other person, or willfully and knowingly and without the prior consent of the other person to become the buyer in respect to any selling order of the other person, or become the seller in respect to any buying order of the other person...

D. Manipulation prohibited

Existing prohibition by the Commodity Exchange Act of market manipulation and fictitious trades would be extended to UEAs, without exemption.[96]

E. Excessive speculation limited

§6a(a)(1) of the Commodity Exchange Act provides:

> Excessive speculation in any commodity under contracts of sale of such commodity for future delivery made on or subject to the rules of contract markets or derivatives transaction execution facilities, or swaps that perform or affect a significant price discovery function with respect to registered entities causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity. For the purpose of diminishing, eliminating, or preventing such burden, the Commission shall, from time to time, after due notice and opportunity for hearing, by rule, regulation, or order, proclaim and fix such limits on the amounts of trading which may be done or positions which may be held by any person, including any group or class of traders, under contracts of sale of such commodity for future delivery on or subject to the rules of any contract market or derivatives transaction execution facility, or swaps traded on or subject to the rules of a designated contract market or a swap execution facility, or swaps not traded on or subject to the rules of a designated contract market or a swap execution facility that performs a significant price discovery function with respect to a registered entity, as the Commission finds are necessary to diminish,

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[95] Ibid §2405.
[96] Ibid §2406, §2407.

eliminate, or prevent such burden…

A new §4a in §6a would permit the CFTC, in the public interest, to establish limits on the quantity of trading that may be done in UEAs, or to establish limits on the quantity of UEAs that may be owned and held.[97]

F. Greenhouse gas instrument trading organizations

New §5h of the Commodity Exchange Act would apply the enlarged rules to registered greenhouse gas instrument trading (and clearing) organisations.

3.7. Synchronisation rule

There was no synchronisation rule proposed in the ACES Act/APA.

4. CONCLUSION

The commodification of the right to emit GHGs, embodied in UEAs, is illustrated by the many design elements of the ACES Act/APA, such as its open-datedness, the absence of a stringent cap and coverage and thresholds. Some features attending to the acquisition, ownership and disposal of UEAs, participation in auctions, and the ability to buy, borrow, bank and/or sell UEAs also demonstrate this commodification.

Box 3.1 compares the proposed emissions trading schemes of Australia and the US.

The UEA as a commodity is restricted, and much more so than the AEU. The US ETS would be open only to compliance entities and regulated GHG market participants. The ability for UEAs to be acquired by any entity (irrespective of whether covered or not covered) would be regulated, and hence speculation for profit, rather than achieving a climate objective, would be constrained.

The ACES Act/APA, and the foreshadowed amendments to the Commodity Exchange Act counter the design bias identified in the CPRS, but stop short of restricting free transfer of UEAs via a synchronisation rule. Implicitly, reliance is placed on the enhanced carbon market integrity regime and the prohibition of excessive speculation through the setting of trading limits.

[97] Ibid §2404.

Box 3.1: Comparing the CPRS to the US ETS

ETS DESIGN FEATURE	CPRS	ACES Act/APA
Open-dated scheme	✓	✓
Modified cap	✓	✓
Universal coverage	×	×
Unfettered ownership	✓	×
Unrestricted transfer	✓	×
Account opening gate	×*	✓**
Fettered ownership	×	✓
Restricted transfer	×	✓
Banking	✓	✓
Borrowing	✓	✓
Anti-abuse regime	✓	×
Market integrity regime	✓*	✓✓
Synchronisation rule	×	×
Sufficient penalty deterrent	?	?

Notes: * Limited provisions, further detail to be promulgated in regulations. ** Detailed regulations for 'regulated GHG market participant' are yet to be designed.

The contrast between the ownership rules in the proposed CPRS and the ownership rules in the proposed US ETS is stark.

A functional analysis reveals that the emissions trading schemes are practically identical. The role of the right to emit GHG created by each of the emissions trading schemes is identical. However, the rights of ownership attendant with the AEU and attendant with the UEA diverge, as a consequence of the limitation imposed upon participation in the markets for the right.

Before exploring this diversion in approach, this thesis now turns to examine the risks to fair and orderly carbon markets that unfettered ownership of the right to emit GHG encourages. The CPRS, as proposed, would not fetter ownership of AEUs. The lessons learned from operational emissions trading schemes created without a synchronisation rule or enhanced carbon market integrity regime are the subject of chapter four.

CHAPTER 4

LESSONS FROM THE CARBON MARKETS

Markets can collapse if their credibility is shaken excessively. This is all the more pertinent for markets that owe their existence solely to government decree, like a carbon pricing regime[1]

Commodification of the right to emit GHG disconnects the commodity – the AEU to be created in Australia, the CER, the ERU and the RMU created in the international market, the EUA created in the EU, the NZU created in New Zealand, and the UEA to be created in the US – from the underlying emission of GHG.

In the design of the operational emissions trading schemes studied in this thesis the unfettered ownership of the commodity permits abuse of ETS design rules by gaming, and other aberrant behaviours by non-liable entities, such as theft and fraud on liable entities and States, and manipulation and excessive speculation in emissions units, independent of the achievement of environmental objectives.

This chapter analyses the behaviour experienced in operational emissions trading schemes, and asks: what lessons may be learned? Could Australia witness fraudulent activity similar to that experienced in other emissions trading schemes? What other type of gaming could the CPRS allow? Would AEUs be subject to excessive speculation?

The chapter exposes existing methods and opportunities for exploiting design elements of emissions trading schemes. The focus of the chapter is the activities of actors in the carbon markets that have been driven by opportunities to profit from ETS design, disconnected from any liability under the scheme.

Case studies illustrate the gaming opportunities arising from the design and complexity of emissions trading schemes including from the exploitation of commonalities and differences in ETS legislation, arbitrage permitted by commensuration, and the scope for theft and fraud and other abuse of emissions units.

The six lessons outlined in this chapter suggest that there are risks inherent in the design of the proposed Australian ETS and perverse incentives for financial gains from commodification of the AEU. By illuminating activities of actors in existing carbon markets driven by profit rather than emissions reduction motives, parallels may be drawn with potential activities of actors in the Australian ETS.

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[1] Ross Garnaut, 'Carbon pricing and reducing Australia's emissions' (Garnaut Climate Change Review – Update 2011: Update Paper 6, Garnaut Climate Change Review, March 2011) 15.

In summary:

1. gaming and arbitrage is inherent in a fragmented global carbon market with contrasting design rules in emissions trading schemes;
2. theft and fraud (and similar abusive practices) are facilitated by the unfettered ownership of emissions units;
3. the CPRS in its proposed design would not capture excessive speculation by non-liable entities;
4. financial intermediaries would find opportunities to profit by trading compliance units between the Australian ETS and international markets;
5. gaming behaviour would be incentivised by unfettered ownership; and
6. monetising carbon sequestration would not necessarily reduce emissions.

This thesis argues that the essence of a fair and orderly market is that no participant in the market has an advantage and the market is free of gaming as well as theft, fraud, manipulation and excessive speculation.

Testing the lessons of this chapter against the threshold of a fair and orderly market reveals that operational emissions trading schemes have failed.

Not all participants faced the same potential liability under the emissions trading schemes.

Abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units occurred.

Directing attention to the consequences of unfettered ownership provides the rationale for its proposed rules to better address the interface between ownership of AEUs by non-liable entities with liability under the CPRS.

Because this thesis asserts that the risks of such behaviour may be arrested by a synchronisation rule and an enhanced carbon market integrity regime, the analysis of this chapter lays the foundation for introducing the corrective legislation in chapter five.

1. LESSON 1: GAMING AND ARBITRAGE ARE INHERENT IN A FRAGMENTED GLOBAL CARBON MARKET

Climate change is a global problem, requiring a global solution.[2] However, there is no universal global carbon market. Instead, the market-based mechanisms so far introduced are the patchwork of emissions trading schemes identified as the subject for examination in this thesis. They represent fragmented international and State laws and rules.

Within this patchwork, Alberola and Stephan (2010) counted 96 carbon funds[3] operating in 2010.[4] Carbon funds and *financial institutions that are globally systemic*[5] (*G-SIFIs*) operate in many jurisdictions.[6] Combining carbon funds, G-SIFIs and the numbers of liable entities in the EU ETS (installations) and the NZ ETS (participants), there is well over 11 000 potential market agents.

Some of the liable entities are *multi-national corporations* (*MNC*) with operations in Europe, the US, New Zealand and Australia, or with interests in subsidiaries, partnerships or joint ventures. Non-liable entities also may be carbon funds, MNCs and G-SIFIs.

Alberola and Stephan noted that approximately 42 per cent of carbon funds operate 'with the objective of financial gains … invest[ing] in carbon assets with the aim of subsequently reselling them on the secondary market at a higher price than was paid for them.'[7] There is no direct evidence or research about whether a similar percentage of financial intermediaries (including G-SIFIs) and other non-liable entities operate with the same motive. Common sense and experience (and economic theory) say that because these entities do not have a liability under any ETS, they would actively participate in the carbon markets for profit.

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[2] Sir Nicholas Stern, *The Economics of Climate Change: The Stern Review* (2007) xiii; Ross Garnaut, 'Final Report to the Commonwealth, State and Territory Governments of Australia' (Garnaut Climate Change Review, 30 September 2008) xviii.
[3] Carbon funds are investment vehicles which raise public and/or private capital to purchase CERs and ERUs (carbon credits) in the primary market established by projects under the CDM and JI.
[4] Emilie Alberola and Nicolas Stephan, 'Carbon Funds in 2010: Investment in Kyoto Credits and Emissions Reductions' (Climate Report No 23, CDC Climat Research, 2010).
[5] *Financial institutions that are globally systemic* (*G-SIFIs*) were recognised by the G20, 'Leaders' Declaration: The Seoul Summit Document' (Leaders of the Group of Twenty, Seoul, 11/12 November 2010) 7.
[6] Alberola and Stephan, above n 4, 16.
[7] Ibid 16 (interpolation added).

The fragmented international carbon market is shaped by the Kyoto Protocol to the UNFCCC, the EU ETS, the NZ ETS and emissions trading schemes proposed in China, Japan, the US, and other States, including Australia. There is no universally binding emission limitation and reduction commitment in Annex B of the Kyoto Protocol, nor are there uniform legal approaches to reductions of GHG emissions by States. The structure of the UN and the UNFCCC framework[8] allows States to fashion their use of the global atmosphere. States fashion their domestic laws,[9] the definition and allocation of the rights to emit GHG, and build into domestic laws emissions-intensive trade-exposed (EITE) and other assistance mechanisms. Such separate approaches by the UN and by States to the common commodity (the right to emit GHG, unitised to 1t CO_2-e) are further indication of commodification.

At best, the UNFCCC and the Kyoto Protocol comprise agreements by and among States, enshrining and reflecting assumed sovereignty by States in the atmosphere over their territory.[10] Rights in the atmosphere are not ceded to the UN by the UNFCCC, the Kyoto Protocol, the Marrakesh Accords, the Copenhagen Accord or the Cancun Agreements. Rather, the Kyoto Protocol flexibility mechanisms in Article 6, 12 and 17, together with the unitisation of the quantified reduction commitments in Annex B, constitute an international system of tradable GHG emission rights by Annex B countries,[11] evidencing the commodification and commensuration of rights to emit GHG by Annex B countries.[12]

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[8] Discussed in chapter two.

[9] Koskenniemi (2010) argues that 'States are bound by the agreements they have made not as a *derogation* of their sovereignty but as an *effect* of it.' Martti Koskenniemi, 'What Use for Sovereignty Today?' (2010) *Asian Journal of International Law* 1, 2 (emphasis in original). On the other hand, Sir Neil MacCormick in *Questioning Sovereignty* (1999) explores the relationship of State to law, noting four possibilities - the State as law-dependent, the law as State-dependent, State and law as coexistent, and identity of State and law. Sir Neil MacCormick, *Questioning Sovereignty* (Oxford University Press, 1999). In either approach it is evident that parties to the Kyoto Protocol, having ceded neither sovereignty nor rights into the UN framework, the right to emit GHGs are within States.

[10] A question, outside the scope of this thesis, is whether States do have any such property in the air.

[11] Urs Springer, 'The market for tradeable GHG permits under the Kyoto Protocol: a survey of model studies' (2003) 25 *Energy Economics* 527, 528; Robert W Hahn and Robert N Stavins, *What Has the Kyoto Protocol Wrought? The Real Architecture of International Tradeable Permit Markets* (AEI Press, 1999).

[12] The allocation in the Kyoto Protocol of assigned amounts to Annex B countries, based on their 1990 historic GHG emissions adjusted for the emission limitation and reduction commitments in Annex B, must explicitly recognise the rights of States to emit GHG into the atmosphere, up to their assigned amounts over a five year period (i.e. equal to the total AAUs held by the State increased by CERs, ERUs and RMUs). Although the Kyoto Protocol dictates how States are to calculate the assigned amount, the specification by the parties of the base year percentage in Annex B does not create in the UN any

This State-centric approach to the right to emit GHG is reflected in the international arena through the negotiating positions adopted by States at COP/MOP.[13] Neither China, now estimated by volume to be the biggest GHG emitter globally,[14] nor the US, historically the largest emitter of GHG,[15] has committed to any binding GHG emissions reduction targets.

The rights of a State to emit GHG are potentially very valuable, and hence influence State behaviour. For Annex B States, whatever their allocation of assigned amounts, augmentation by trading of AAUs, and acquisition of CERs and ERUs, they are permitted to emit GHG into the atmosphere, over a five year period, up to the combined total of their AAUs, CERS and ERUs (because that is the agreement amongst themselves), or to sell the surplus AAUs. For example, Russia was induced to ratify the Kyoto Protocol because of a real prospect that as a result of economic decline, Russian emissions would be substantially below its assigned amount (without Russia undertaking any action to curb emissions). This would enable Russia to sell its excess AAUs, estimated to be up to three billion t CO_2-e. These emissions are referred to as 'hot air', and were estimated by Victor, Nakićenović and Victor (2003) to be worth up to US$170 billion in the first commitment period.[16]

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ownership of or claim over the resultant AAUs. art 2 of the Kyoto Protocol, for example, relevantly provides (emphasis added):

> *Each Party* included in Annex I, in achieving its quantified emission limitation and reduction commitments under art 3, … shall:
>
> (a) Implement and/or further elaborate policies and measures *in accordance with its national circumstances* …

AAUs are issued by States, and recorded in country (National) registries. AAUs are owned by States, and this ownership is supported by the detailed regime for accounting, issuance, holding, transfer, acquisition, cancellation, retirement and carryover of Kyoto units by States.

[13] It is outside the scope of this thesis to analyse the different negotiating positions of States.

[14] Jane A Leggett, Jeffrey Logan and Anna Mackey, 'China's Greenhouse Gas Emissions and Mitigation Policies' (Policy Brief, Congressional Research Service, 2008).

[15] United Nations, Framework Convention on Climate Change Subsidiary Body for Implementation, 'National communications and greenhouse gas inventory data from Parties included in Annex I to the Convention; Reports on national greenhouse gas inventory data from Parties included in Annex I to the Convention for the period 1990–2007 and the period 1990–2008', UN Doc. FCCC/SBI/2010/18.

[16] David G Victor, Nebojša Nakićenović and Nadejda Victor, 'The Kyoto Protocol Emission Allocations: Windfall Surpluses for Russia and Ukraine' (2003) 49(3) *Climatic Change* 263. Russia was the 55th State to ratify the Kyoto Protocol, thereby causing the Kyoto Protocol to become operative. See also: Frank Jotzo and Axel Michaelowa, 'Estimating the CDM market under the Marrakech Accords' (2002) 2(2) *Climate Policy* 179; Christoph Böhringera and Andreas Löschel, 'Market power and hot air in international emissions trading: the impacts of US withdrawal from the Kyoto Protocol' (2003) 35(6) *Applied Economics* 651; Sergey V Paltsev, 'The Kyoto Protocol: "Hot air" for Russia?' (2000) Working Paper No. 00-9, Discussion Papers in Economics, Department of Economics, University of Colorado. Notably, such an overhang supply of AAUs, coupled with the issue of environmental integrity of un-greened trades affects pricing and potential market performance for other countries and market players

State-centric approaches to GHG emissions are reflected in States' domestic laws.[17] Within the existing laws for operational emissions trading schemes in the EU and New Zealand, there is (as noted in chapter two) an absence of uniformity of definition, coverage and other fundamental design aspects, in addition to different national and scheme reduction targets. The State-centric manner in which each ETS allows importation and exportation of rights to emit GHG defines each scheme's linkage to the UNFCCC mechanisms, and protection afforded to liable entities through EITE assistance programs (for example, in Part 8 of the CPRS Bill in Australia, and (from 2013) in Article 10(b) of Commission Directive (EC) 87 of 2003 in the EU ETS).

Professor Ross Garnaut considered that global harmonisation of laws and rights to emit GHG are 'too slow and patchy to be effective.'[18] To the extent that States act to promote and protect their own self-interest,[19] they also open the avenue for cross-border and cross-market arbitrage by both liable entities and non-liable entities who attempt to profit from uncertainties and differences in interpretation of State legislation. The introduction of a synchronisation rule and enhanced carbon market integrity regime into the CPRS is directed to attempting to arrest such activity (see chapter five) by these entities.

None of the relevant definitions for liable entity,[20] installation or participant in the CPRS Bill, Commission Directive (EC) 87 of 2003 (as amended), or the CCR Act captures an MNC or G-SIFI. Nor do the operative provisions of those laws. Since there is currently no limitation on who may open a Registry account, there is no prohibition

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(see Natalia Gorina, 'Green Investment Schemes: Cooling Down Hot Air', (2006) Global Carbon Supplement, *Environmental Finance*, 47; Henry Derwent, President and CEO of International Emissions Trading Association (IETA), letter to Mr Pavel Zamzslicky, Head of Delegation, Climate Change Department, Ministry of the Environment of the Czech Republic, 17 June 2009). On this account, the IETA has recommended (inter alia) a limitation on the ability of Annex 1 countries to carry-forward AAUs into the next commitment period (if any) that might be negotiated under the Kyoto Protocol.

[17] Indeed, for some countries, there is a 'moral hazard' – a 'perverse incentive' – not to impose regulations on emissions, so as to attract CDM investment: Cameron Hepburn, 'Carbon Trading: A Review of the Kyoto Mechanisms' (2007) 32 *Annual Review of Environment and Resources* 375, 386.

[18] Garnaut, above n 1, 191.

[19] This international situation is called a prisoner's dilemma. For a fuller discussion, see Garnaut, above n 1, 288.

[20] A definition of 'controlling corporation' in s 7 of the NGER Act intends the corporation at the top of the corporate hierarchy in Australia to be registered as the controlling corporation for the purposes of the NGER Act. Accordingly, if there is a group of companies, with an Australian holding company, then the Australian holding company will be registered, or if there is a group of companies with a foreign holding company, then the Australian 'head company' that is owned by the foreign holding company will be registered.

on more than one member of a MNC group participating in any of these markets.

In contrast, intra-group entities would be affiliates within the liability coverage in the APA.

In an ETS with unfettered ownership potential, it would be possible in Australia and elsewhere for a MNC and a G-SIFI to have many entry points into the markets.[21] A MNC or G-SIFI could therefore adopt an international perspective to its portfolio of emissions units. The international trading desk of a MNC and G-SIFI would seek out profit opportunities arising from arbitrage between markets in different countries. From an internal MNC or G-SIFI perspective such activity would be considered 'in-house.'[22]

The international carbon market may also be subject to interactions with other markets, including the gas, coal and oil markets.[23] It might be expected that a percentage of liable entities and non-liable entities would be participants in these other markets. However, there are no provisions in the CPRS Bill:

- cross-referencing the activities of liable entities in other markets, even if these other markets could fundamentally affect the CPRS (for example, if there is a correlation between energy consumption and GHG emissions levels);[24] or
- cross-referencing and accumulating the ownership of AEUs by liable entities and non-liable entities, where each is a member of the same MNC of G-SIFI group;[25] or
- constraining the ownership of AEUs by non-liable entities, even if the activities of non-liable entities in other markets might affect the prices of AEUs.[26]

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[21] Proposed changes to Registry account opening rules in the EU ETS (discussed in chapter seven) do not fully close off multiple market entry points.

[22] There are precedents for this type of behaviour. See, eg, Bethany McLean and Peter Elkind, *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron* (Portfolio, 2004); Andrew Ross Sorkin, *Too Big to Fail* (Viking, 2009).

[23] Interagency Working Group for the Study on Oversight of Carbon Markets, 'Report on the Oversight of Existing and Prospective Carbon Markets' (Report, US Commodity Futures Trading Commission, 18 January 2011) 32; Environmental Markets Association, Submission to Commodities Futures Trading Commission, *Study of Oversight of Existing and Prospective Carbon Markets*, 17 December 2010 3.

[24] Such correlation is noted in the European Environment Agency, 'Annual European Community greenhouse gas inventory 1990–2006 and inventory report 2008' (Report, European Commission, 2009).

[25] There is no provision for cross-reference to other markets, for MNCs or G-SIFIs or even between EU member States in legislation for the EU ETS. There is no provision for cross-reference to other markets or for MNCs or G-SIFIs in the NZ ETS. The US ETS does capture affiliates of liable entities, but there is no cross reference to other markets (although the absence of such connection is noted by the Interagency Working Group for the Study on Oversight of Carbon Markets, discussed in s 2.2 of chapter seven).

Thus the international trading desk of a MNC or G-SIFI could seek out potential to profit from arbitrage between different but related products, without any cross-regulatory or cross-market capture.

The introduction of a synchronisation rule into an Australian ETS, designed to pre-emptively link ownership of an AEU with obligations under the GHG emissions reduction scheme, could help protect Australia's carbon market from cross-border and cross-market gaming, manipulation and excessive speculative activity by carbon funds, MNCs and G-SIFIs. As a minimum, the profit motive and opportunity could be tempered with potential for liability, thereby putting G-SIFIs, MNCs, financial intermediaries and liable entities all on the same footing.

2. LESSON 2: CRIME PAYS

Emissions trading schemes are self-assessment regimes. Their 'legal consequences are designed to ensure that the [liable entity] has an incentive to be honest, or at least not too dishonest.'[27] The institutions and institutionalisation created by emissions trading schemes, coupled with the complexity of the rules, regulations and processes for the creation and trading of emissions units (AEUs, EUAs, NZUs and CERs, ERUs and RMUs) have led many market actors to act in their own commercial interests and in a manner disconnected from any reduction in GHG emissions.[28] This thesis asserts that tighter Registry account opening rules and an enhanced carbon market integrity regime may arrest theft, fraud and other scams.

2.1. Fraud

There is no reason why carbon markets should be any less immune to fraudsters than any other market – after all, the right to emit GHG is a commodity, and like any commodity owners may be susceptible to cheating. As cyber-attacks (such as phishing and defrauding) in the EU ETS illustrate, an easily transferrable electronic commodity that may be owned by anyone increases its vulnerability. Indeed, in 2009-2010, value

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[26] For such a study in the oil trading markets, see Adair Turner, Jon Farrimond and Jonathon Hill, 'The Oil Trading Markets, 2003-2010: Analysis of market behaviour and possible policy responses' (WPM 42, The Oxford Institute for Energy Studies, April 2011).

[27] Michael Abramowicz, 'The Law-and-Markets Movement' (1999) 49 *American University Law Review* 327, 364 (interpolation added).

[28] Lohmann suggests that the relevant processes have been put into the hands of the 'carbocrats:' Larry Lohmann, 'Democracy or Carbocracy? Intellectual Corruption and the Future of the Climate Debate' (Corner House Briefing 24, 2001).

added tax (*VAT*) fraud involving the sale of EUAs within the EU ETS is estimated to have deprived EU revenue authorities of in excess of €5 000 000 000.[29]

In its simplest form VAT fraud involves an organisation obtaining a VAT registration number in one or more EU member States for the purposes of purchasing goods free from VAT in one EU member State, and then selling them at a VAT-inclusive purchase price in another EU member State. After the sale is completed, the organisation then goes missing or defaults without paying the VAT due on the sale. A more abusive form of the fraud – known as carousel fraud – involves the same goods being traded around contrived supply chains within and beyond the EU.

The CPRS and Australian revenue could be vulnerable to similar fraud. Case study one (Box 4.1) presents a step-by-step guide to how such fraud may occur in Australia.[30]

The scope for fraud on the Australian revenue illustrated in case study one would be assisted by the design of Australia's *goods and services tax* (*GST*) system. AEUs, CERs and ERUs would be taxable supplies for GST purposes. Liability for GST would fall upon the vendor of AEUs, CERs and ERUs. The Australian purchaser would claim the GST included in the purchase price as an input tax credit in its business activity statement (*BAS*) return. The *Australian Taxation Office* (*ATO*) would be obliged to refund the GST claimed as an input tax credit by the Australian purchaser in its BAS return. The vendor would be obliged to remit the GST collected from the purchaser upon the sale of AEUs, CERs and ERUs to the ATO with its BAS return, but its intention is never to comply with the law. No BAS return would ever be lodged.

The Australian Government, to whom the GST is owed, would be at risk of total loss of revenue. In case study one, the ATO would be empowered to launch recovery proceedings against Company F for the GST owing, and upon obtaining judgment, to wind up Company F. There may also be recovery action which may be brought against the directors and officers of Company F.

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[29] Financial Action Task Force, 'Laundering the proceeds of VAT carousel fraud' (Report, Organisation for Economic Cooperation and Development, 2007); Nina Chestney, 'UK tax authority names carbon fraud suspects', *Thomson Reuters, Business & Financial News* (London), 27 January 2011. The *valued added tax* (*VAT*) procedures for EUAs have been changed to combat carousel fraud.

[30] It is noted that potentially this type of fraud could occur with any GST transaction.

Box 4.1: A case study of fraud under the CPRS

A CASE STUDY OF FRAUD UNDER THE CPRS

1. Day 0, assume fraudsters have caused the incorporation of Company F in a foreign jurisdiction, then:
   a. Company F establishes an address for service in Australia;
   b. Company F is not required to register as carrying on business in Australia if it merely maintains a bank account, or effects any sale through an independent contractor, or conducts an isolated transaction that is completed within a period of 31 days and is not repeated from time to time, or invests any of its funds or holds any property in Australia, but nonetheless, Company F may apply to be registered as a foreign company carrying on business in Australia, and obtain an Australian Registered Body Number (*ARBN*);
   c. Company F may apply for an Australian Business Number (*ABN*) based on its ARBN and if it declares it will carry on an enterprise in Australia and expects to earn more than A$50 000 per annum; and
   d. Company F opens a bank account in Australia – even with the AML/CTF rules, this is a straight-forward process, using evidence of the ARBN and ABN.
2. Day 1, Company F opens a Registry account in Australia. As s 147 of the CPRS Bill currently provides, proof of identity ought to be satisfied by Company F by quoting its ARBN, and bank account information.
3. Day 1, Company F purchases CERs. This transaction is not subject to any goods and services tax (GST) (and not subject to valued added tax (VAT)).
4. Day 3, Company F imports the CERs into its Australian Registry account. As Kyoto units they qualify as EEUs.
5. Day 4, Company F sells the CERs to an Australian purchaser. The sale of the CERs is subject to GST, so the purchase price is increased by 10 per cent on account of the GST. The total sales consideration for the CERs is remitted to the bank account of Company F established in step 1(d).
6. Day 4, pursuant to ss 107 and 108 of the CPRS Bill, ACCRA is instructed to transfer the CERs to the purchaser.
7. Day 6 –9, Company F transfers the sale proceeds (inclusive of the GST) to another bank account, located in an overseas jurisdiction. Company F keeps transferring the sale proceeds through different bank accounts and countries, and then disburses all the sale proceeds to its fraudster promoters.
8. Day 58 (or day 118), Company F fails to lodge a business activity statement (BAS) for the quarter in which day 4 – the day of sale of the CERs – occurred. The BAS is due by the 28th day of the next reporting period (this could either be a month or a quarter) but Company F fails to lodge at all.[31]

Tightening Registry account opening requirements and limiting participation in the carbon market to liable entities and regulated GHG participants as outlined in chapter five could make it harder for Company F to perpetrate this type of fraud by raising the entry hurdle as a deterrent.

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[31] It is outside the scope of this thesis to discuss whether the ATO would *ever* collect the GST included on the sale of the CERs and due to the Australian revenue from Company F.

2.2. Theft

Through 2010 and early 2011, the cyber theft of EUAs resulted in the European Commission suspending transactions (other than allocation and surrender of EUAs) in all national registries of the EU ETS at 7 p.m. on 19 January 2011.[32] The transitional measure, which was expected to last one week, continued longer, and was 'taken in view of recurring security breaches in national registries,'[33] namely thefts of EUAs.[34] The practical impact of the suspension was to close the spot market for EUAs.[35] National registries progressively reopened from early March 2011to mid-April 2011.

In order for criminals to carry out these electronic raids on Registry accounts, there had to be another Registry account into which the EUAs could be transferred. Self-evidently, this means that the criminals (or their accomplices) had to have their own Registry account(s). Of course, anybody can open a Registry account (as also proposed in the CPRS Bill), for this reflects the philosophy of unfettered ownership of EUAs.

The Australian Crime Commission recognises that 'there are opportunities for organised crime groups to … exploit complex financial processes designed to offset carbon.'[36] A synchronisation rule introducing tightened Registry account opening requirements in the Australian ETS would improve protection of the Australian carbon market.[37]

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[32] Jos Delbeke, Director-General, DG Climate Action of the European Commission, 'Announcement of transitional measure: EU ETS registry system' (Press Release, Directorate-General for Climate Action, 19 January 2011).
[33] Ibid.
[34] Knowledge@Wharton, *Phishing, Bribery and Falsification: Combating the Complexities of Carbon Fraud* (9 June 2010) Wharton School of the University of Pennsylvania <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2521>.
[35] The European Commission denied it was closing the EU ETS: Jos Delbeke, Director-General, DG Climate Action of the European Commission, 'Emissions Trading: Q & A following the suspension of transactions in national ETS registries for at least one week from 19:00 CET on Wednesday 19 January 2011' (Memo/11/34, Directorate-General for Climate Action, 21 January 2011). Further, it asserted that 'since the European carbon market consists mainly of futures, where delivery does not take place immediately, this suspension of certain transactions will have a minimal effect on the overall market.'
[36] Australian Crime Commission, 'Organised Crime in Australia 2011' (Report, Australian Crime Commission, 2011) 38.
[37] See also International Emissions Trading Association, 'Concerns: Closing the door to fraud in the EU ETS' (Letter to Jos Delbeke, Deputy Director General, Directorate General for Environment, European Commission, 11 February 2010).

3. Lesson 3: the CPRS will not capture speculation by non-liable entities

As noted in ss 2.3 and 2.4 of chapter one, the penalty and anti-avoidance provisions of the CPRS Bill are limited.

Recall that s 132 of the CPRS Bill exposes a liable entity to shortfall penalties in the event that the Part 3 liable entity fails (by 15 December) to surrender sufficient eligible emissions units to cover their emissions number for the previous eligible financial year ended 30 June. However, in the safety valve transitional period (expected to end between 2015 and 2017), it would be expected that no liable entity would suffer a unit shortfall. If the carbon price framework follows s 89 of the CPRS Bill, AEUs would be issued at a fixed price upon application by liable entities, up to the number of AEUs necessary to cover the emissions number of the liable entity.[38] If there is a unit shortfall, then the prescribed amount of the unit shortfall penalty (applicable to each unit of shortfall) would be limited to 110 per cent of the benchmark average auction price (BAAP) for AEUs in that financial year.[39]

Through and beyond the transitional period, how effective at combating gaming will the shortfall penalty and make-good[40] requirement be? If compliance is one of the keys to a successful ETS, then this thesis asserts that a compliance mechanism[41] that does not

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[38] CPRS Bill s 89(2). Fixed price AEUs would be automatically surrendered upon issue.

[39] Ibid s 133(1), s 141. The shortfall penalty is not tax deductible: proposed div 70 of pt 2-25 of the *Income Tax Assessment Act 1997* (Cth) (1997 Tax Act). The shortfall penalty must be paid by 31 January in the next eligible financial year (CPRS Bill s 134) and if not paid, is subject to a late payment penalty of 20 per cent per annum (CPRS Bill s 135).

[40] Ibid s 142.

[41] Compliance mechanisms are one of the least tested mechanisms, under the Kyoto Protocol and in other carbon markets: Scott Barrett, 'International Cooperation and the International Commons' (1999) 10 *Duke Environmental Law & Policy Forum* 131. Under the Kyoto Protocol, if an Annex 1 country fails to meet its target, the enforcement branch of the Compliance Committee of the UNFCCC is authorised to:

- issue a public declaration declaring that the party is in non-compliance (called 'name and shame');
- require the party to make up the shortfall within 100 days after an expert review of their annual emissions inventory;
- require the party, if at the end of 100 days the shortfall has not been rectified, to make up the difference between emissions and assignment amounts during the second commitment period (if any) post 2012;
- require the party to reduce emissions by an extra 30 per cent in successive commitment periods;
- require the party to submit a compliance action plan and suspend eligibility of the party to trade under the Kyoto mechanisms; and
- restore eligibility of a party if it can demonstrate it has rectified and is meeting the relevant criteria.

apply to non-liable entities is fundamentally deficient because it leaves open the possibility for non-liable entities to engage in speculation and activity potentially disruptive to the carbon market. Dealings by non-liable entities lie outside regulatory capture.

Because there would be no liability or reportable standard of behaviour for non-liable entities, abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units is left implicitly un-sanctioned. Unfettered ownership opens the gateway for such behaviour. This thesis argues that in order to be deterred from such behaviour non-liable entities should be exposed to tough Registry account opening rules and liability under the Australian ETS, including financial and make-good penalties, in the same manner as liable entities.

4. LESSON 4: TRADING IEUS FOR AEUS MAY PROFIT INTERMEDIARIES

Substitution would be permitted in time between IEUs and AEUs. Under the CPRS Bill an Australian liable entity would acquit liability by surrendering only IEUs. Indeed, commensuration biases substituting IEUs for AEUs.

Lohmann (1998, 1999, 2000, 2001, 2005, 2006, 2008, 2009 and 2010) argues[42] that a

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The compliance status of installations under the EU ETS is not yet fully determined: Phase II of the EU ETS finishes on 31 December 2012.

[42] Larry Lohmann, 'The Dyson Effect: Carbon 'Offset' Forestry and the Privatization of the Atmosphere' (Corner House Briefing 15, The Corner House, 1999); Larry Lohmann, 'Whose Voice is Speaking? How Opinion Polls and Cost-Benefit Analysis Synthesize New "Publics"' (Corner House Briefing 07, The Corner House, 1998); Larry Lohmann, *Carbon Trading: a critical conversation on climate change, privatisation and power* (What Next: Development Dialogue No 48, 2006); Larry Lohmann, 'Democracy or Carbocracy? Intellectual Corruption and the Future of the Climate Debate' (Corner House Briefing 24, The Corner House, 2001); Larry Lohmann, 'Shopping for Carbon: A New Plantation Economy' (Paper presented at the Agrarian Studies Conference, Yale University, New Haven, Connecticut, 12-13 May 2000); Larry Lohmann, 'Carry on Polluting' (2006) 2580 *New Scientist* 18; Larry Lohmann, 'When Markets are Poison: Learning about Climate Policy from the Financial Crises' (Corner House Briefing 40, 2009); Larry Lohmann, 'Activism, Expertise, Commons' (Dag Hammarskjöld Foundation, 2006); Larry Lohmann, 'A (Crumbling) Wall of Money: Financial Bricolage, Derivatives and Power' (Corner House Briefing 39, 2008); Larry Lohmann, 'Neoliberalism and the Calculable World: The Rise of Carbon Trading' in Kean Birch, Vlad Mykhnenko and Katherine Trebeck (eds), *The Rise and Fall of Neoliberalism: The Collapse of an Economic Order?* (2009) ; Larry Lohmann, 'Regulatory Challenges for Financial and Carbon Markets' (2009) 2 *Carbon and Climate Law Review* 161; Larry Lohmann, 'Toward a different debate in environmental accounting: The cases of carbon and cost-benefit' (2009) 34 *Accounting, Organizations and Society* 499; Larry Lohmann, 'Carbon trading, Climate Justice and the Production of Ignorance: Ten Examples' (2008) 51 *Development* 359; Larry Lohmann, 'Carbon Trading: Solution or Obstacle?' in *The Impact of Climate Change on India* (2008) ; Larry Lohmann, 'Climate Crisis: Social Science Crisis' in *Der Klimawandel: Sozialwissenschaftliche Perspektiven* (VS-Verlag, 2008); Larry Lohmann, '"Strange Markets" and the Climate Crisis' in Elizabeth Bravo (ed), *Crisis financiera o crisis civilizatoria [Financial Crisis or Civilisation Crisis]* (Instituto de Estudios Ecologistas del Tercer Mundo, Accion Ecologica and Oilwatch, 2010) .

fundamental flaw of emissions trading schemes is the assumption that environmental benefit can be unitised via reductions in different types of emissions to a common base, 1t CO_2-e.[43] Lohmann argues that such commensuration[44] involves the manipulation of scientific method, and strain of economic theory and legal definition to make many 'things' that are different equivalent:

> The market ... presupposes an accounting system capable of commensurating and calculating over decades the global interactions of intercoupled ecological, social, geological, political, hydrological, bureaucratic, economic, and atmospheric systems. The fact that such an accounting system is impossible has not so far proved to be an obstacle to the ongoing construction of the market ...[45]

Commensuration within the definitions of emissions unit results in variation in the right to emit specified as 1t CO_2-e. Certainty is absent. Variation is also apparent because GWP is a construct of equivalence, assuming substitutability among GHGs. As noted, between States and also the UN institutions, GWP factors are not consistent.[46] These differences, whilst appearing only minor differences in form, may translate into significant financial benefits and super profits for traders in AEUs, EUAs, NZUs, UEAs, AAUs, CERs, ERUs and RMUs.

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[43] It will be recalled that each Kyoto unit, 1 t CO_2-e, is represented as any one of AAUs, CERs, ERUs or RMUs transferrable between Annex B countries. Any Kyoto unit will substitute (subject to the commitment period reserve) when surrendered by States for the purpose of demonstrating compliance. Notional reductions and actual reductions are commensurate. AAUs, CERs, ERUs and RMUs are offset credits: they represent notional emissions reductions. Yet AAUs will substitute for NZUs in the NZETS. Further, CERs and ERUs will substitute with AEUs in the CPRS, as well as EUAs in the EU ETS and NZUs in the NZETS. For some time now, commensuration and differences in computations, descriptions of BAU baselines and identification of whether CDM projects have been truly additional, have also been at the centre of complaint about CERs arising from CDM projects. See, eg, Dennis D Hirsch 'Trading in Ecosystem Services: Carbon Sinks and the Clean Development Mechanism' (2006) 22 *Journal of Land Use and Environment* 623, 632; Hepburn, above n 18; Lohmann, 'Toward a different debate in environmental accounting: The cases of carbon and cost–benefit', above n 42; Connie Hedegaard, European Commissioner for Climate Action, 'Statement on the Commission's proposal for quality restrictions on the use of credits from industrial gas projects' (Press Memo/10/614, European Commissioner for Climate Action, 25 November 2010).

[44] Wendy Nelson Espeland and Mitchell L Stevens, 'Commensuration as a Social Process' (1998) 24 *Annual Reviews* 313.

[45] Lohmann, 'Shopping for Carbon', above n 42, 1.

[46] Cases T-183/07 and T263/07, discussed in chapter two, illustrate the artificial nature of the right to emit GHG (also made apparent by this thesis) and how accounting and computation methodology can arbitrarily determine the extent of rights to emit GHG. For instance, in the case of the Republic of Poland, the contested difference in GHG emissions – due *solely* to alternative assessment methodologies – amounted to 76.132937Mt CO_2-e per annum, every year. Notably, the ECFI concluded that 'it is not for the Commission … to select and apply a single method of assessing the NAPs of all the Member States:' Case T-183/07, [103].

Box 4.2: A case study of profit under the CPRS

A CASE STUDY OF PROFIT UNDER THE CPRS

Assume the price of carbon is A$10/t.

Assume a Part 3 liable entity emits 10 000t CO_2 and 10 000t CH_4 from a facility in Australia. Total CO_2-e emissions to be reported (NGER Act, scope 1 GHG emissions) and acquitted (CPRS Bill, emissions number) will be 220 000t CO_2-e. The reported emissions will be computed as:

10 000t CO_2 + 10 000t CH_4 x 21[a] = 210 000t CO_2-e.

For an emissions number of 220 000, under the CPRS Bill the liable entity may surrender either:

- 220 000 AEUs; or
- 220 000 IEUs; or
- any combination thereof.

Assume the liable entity surrenders with IEUs only, comprising CERs exclusively.

It will be noted that 220 000 CERs will not necessarily correspond with 10 000t CO_2 and 10 000t CH_4.

Assume that 10 000 of the CERs represent CO_2 emissions. How many tonnes of CH_4 does 210 000 CERs represent?

The answer is 9 130 tonnes (210 000/23[b])!

Acquittal using CERs allows an additional (differential) emission of 870t CH_4.

Notes: a. 21 is the GWP as per NGER Reporting Regulations, R2.02.
b. 23 is the GWP used by the IPCC (AR 2).

Case study two (Box 4.2) demonstrates that because the CPRS liability is fully discharged by surrender of IEUs, the differential emission permitted by the commensuration is ignored under the CPRS Bill and would therefore be permanent, escaping coverage under the CPRS.

The differential presents as an opportunity. If for example, financial intermediaries intervene as the go-between, acting as the buyer of CERs from CH_4 abatement and as the seller of CERs into the CPRS (in substitution for AEUs), there is a potential source of fee income for their trading and arbitrage activity – at A$10/t CO_2, worth up to A$200 100 (870t CH_4 x 23). And of course, the financial intermediary has not undertaken any emissions reduction activity or faced any liability under the CPRS. Their reward comes from identifying the opportunity attendant with ETS design and through gaming each of the emissions trading schemes, because unfettered ownership in each ETS permits them to buy and sell without liability. Conditioning liability and ownership via a synchronisation rule would dampen enthusiasm for this type of gaming.

5. LESSON 5: STRUCTURING EMISSIONS MAY INCREASE FINANCIAL BENEFITS

Industrial and chemical production processes physically transform inputs into outputs, and in the process (for the most part) create emissions. There are usually a number of different methods for that transformation, and correspondingly, different emissions profiles. This flexibility potentially allows projects and processes to be structured in order to maximise the financial benefits that might accrue to them under the CDM, the CPRS, and/or between emissions trading schemes.

If the cost of abating 1t CO_2 is the same as abating 1t CH_4, for example, then the financial benefit from abating CH_4 is 21 times (and potentially up to 25 times) greater than abating CO_2 under the CDM, and 23 times greater under the CPRS.[47] Behaviour motivated by the multiplier effect built into GWP has raised concerns about the issue of CERs for trifluoromethane (*HFC-23*) abatement from chlorodifluoromethane (HCFC-22) projects and N_2O credits from adipic acid production and nitric acid projects (collectively, *industrial gas projects*) in the CDM.[48] The following examples illustrate the integrity concerns: the presence of the GWP multiplier in the CPRS, the potential for carbon leakage and the potential for abuse (either through gaming or ramping emissions) may be replicated in Australia.

1. CERs from HFC-23 destruction

   HFC-23 is produced as a by-product of the production of HCFC-22, an ozone depleting substance (*ODS*). HCFC-22 is a scheduled ODS in Australia: *Ozone Protection and GHG Management Act 1989* (Cth), Schedule 1, Part V.

   The GWP of HFC-23 is 11 700[49] and 'hence its destruction under the CDM yields thousands of offset credits or CERs.'[50] Further, 'since HFC-23 destruction is relatively cheap, the profits made from HFC-23 credits are enormous – as

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[47] Recall the differences in GWP ratios, discussed in s 1.4 of chapter one.

[48] One of the most significant requirements for approval of projects under the CDM is that they represent GHG emission reductions that are *additional* – that is, emissions reductions that would not have occurred in the absence of the CDM project. However, where CERs are issued in CDM projects that have established artificially high baselines by rearranging or increasing production, or where the opportunity for the CER has shifted production away from existing processes that already abate emissions, the CERs do not represent real emissions reductions.

[49] NGER Reporting Regulations r 2.02.

[50] Environmental Investigation Agency (*EIA*), 'HFC-23 offsets in the context of the EU emissions trading scheme' (Policy Briefing, Environmental Investigation Agency, 14 July 2010), 1.

much as five times greater than the profits made from selling HCFC-22.'[51] Indeed, the European Commissioner for Climate Action, Ms Connie Hedegaard, noted:

> Crediting the abatement of HFC-23 can create a perverse incentive to produce more HCFC-22 than would have happened without the CDM, and consequently produce credits that are not additional.[52]

CERs from HFC-23 abatement will not be recognised in the EU ETS from 1 January 2013. Unless the design of the CPRS Bill is amended, the same behaviour may occur under the Australian ETS. Free AEUs would be issued under Part 11 of the CPRS Bill to a recognised synthetic GHG destruction customer or operator of an approved synthetic GHG destruction facility, if they are the holder of a certificate of eligible synthetic GHG destruction in force in respect of an eligible financial year.[53] Although regulations are yet to specify the total quantity of synthetic GHG that may qualify for issue of a certificate (and therefore a unit entitlement),[54] the identical multiplier effect is enshrined within the NGER Reporting Regulations, and therefore, the CPRS Bill offers a yield for HFC-23 destruction in AEUs not dissimilar to the yields of CERs available under the CDM.

2. CERs from N_2O destruction

Lambert Schneider, Michael Lazarus and Anja Kollmuss (2010) of the Stockholm Environment Institute (*SEI*) studied adipic acid production and its environmental integrity under the CDM.[55] They noted that N_2O industrial gas projects account for three per cent of all projects in the CDM pipeline of projects, yet account for approximately 25 per cent of the CERs issued, generating on average 116 times as many CERs as the average CDM project.[56] Further, 'with abatement costs that tend to be quite low (€0.1 – €4/t CO_2-e)

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[51] Ibid.

[52] Connie Hedegaard, European Commissioner for Climate Action, 'Questions and Answers on Emissions Trading: Use restrictions for certain industrial gas credits as of 2013', (Press Memo/10/615, European Commissioner for Climate Action, 25 November 2010).

[53] CPRS Bill ss 245-246.

[54] Ibid sub-s 250(2)(b).

[55] Lambert Schneider, Michael Lazarus and Anja Kollmuss, 'Industrial N_2O Projects Under the CDM: Adipic Acid - A Case of Carbon Leakage?' (Working Paper WP-US-1006, Stockholm Environment Institute, 9 October 2010).

[56] Ibid 2. The top 10 CDM projects are all industrial gas projects and accounted for 66 per cent of all CERs surrendered into the EU ETS in 2009: Rob Elsworth and Bryony Worthington, 'International Offsets and the EU 2009' (Report, Sandbag Climate Campaign, July 2010), 5.

relative to the price of CERs, these projects can generate very large profits that may lead to unintended consequences.'[57]

No adipic acid production occurs in Australia,[58] so if CERs generated from N_2O abatement were surrendered in full satisfaction of liability under the CPRS Bill, no GHG emissions reduction would occur in Australia at all. Schneider, Lazarus and Kollmuss described the carbon leakage in relation to N_2O emissions thus:

> The magnitude of this competitive advantage and the fact that plants in industrialized countries generally abate their N_2O emissions raises questions about potential carbon leakage: An economically rational producer can be expected to maximize the adipic acid production of a plant with N_2O abatement under the CDM. Yet in the absence of the CDM, the same plant would not necessarily be able to maximize production, because it would have to compete with other plants, and its production rate would depend on the location of the plant, its specific production costs, and the market demand and prices for adipic acid. This indicates that the CDM incentives could steer the market to significantly shift adipic acid production away from non-CDM plants, leading to carbon leakage.[59]

A financial intermediary may see the opportunity for profit from HCFC-22 or adipic acid production multiplied through equity participation (for example, through an ownership interest in the facility), through the monetisation of the abatement effort (for example, through the issue of CERs for destruction of HFC-23 or N_2O) and through trading (for example, by earning margin in the sale of the CERs from the CDM project as eligible emissions units under the CPRS Bill). The incentive and opportunity for gaming and profit regardless of environmental outcome is institutionalised. If the cost of abating 1t CO_2 is the same as abating 1t HFC-23, then under the CDM and under the CPRS the financial benefit from abating HFC-23 is 11 700 times greater than abating CO_2.

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[57] Ibid.

[58] Adipic acid is a globally traded commodity used as the building block in the manufacture of nylon. N_2O emissions are a by-product of adipic acid production, released in proportion to production and unavoidable. Production of adipic acid occurs in the US, the EU, China and other countries such as Brazil and the Ukraine. Seven adipic acid plants are approved CDM and JI projects (out of 23 adipic acid plants in total globally). The 2006 IPCC Guidelines for National GHG Inventories specify the factor for N_2O emissions from adipic acid production as 300kg N_2O/t, with +/- 10 per cent uncertainty. The CDM methodology uses 270kg N_2O/t.

[59] Ibid 10. Schneider, Lazarus and Kollmuss conclude (at 8) that 'the carbon market has provided incentives to innovate and implement highly effective N_2O abatement solutions… generally, the N_2O abatement performance of the CDM and JI projects is significantly higher than reference values in the literature for the best available technologies … (and) … large added profits generated from abatement of N_2O emissions at plants registered under the CDM suggest that CDM plants have significant competitive advantage.'

6. LESSON 6: CARBON SEQUESTRATION MAY BE MONETISED FOR THE WRONG REASONS

The rules and incentives[60] in Australia for *agriculture, forestry and other land-use projects* (*AFOLU projects*),[61] coupled with the numbers of such projects outside the CPRS,[62] may result in perverse incentives. This is because the disjunction between AEUs and GHG emissions is replicated for *voluntary emission reduction credits* (*VERs*)[63] generated from emissions reductions in AFOLU projects. Again, the synchronisation rule proposed by this thesis would discourage non-liable entities from seeking to profit under the CPRS from such projects.

A recognised standard for the project-level quantification, monitoring, reporting and verification of VERs generated by voluntary GHG reductions or removals from AFOLU projects is the *Voluntary Carbon Standard* (*VCS*), applied in conjunction with its Tool for AFOLU Methodological Issues.[64] The VCS is a recognised standard under the *National Carbon Offset Standard* (*NCOS*),[65] applicable to VERs generated under AFOLU projects in Australia.

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[60] The Kyoto Protocol provides that Annex B countries may adjust their assigned amounts on account of 'human induced land-use change and forestry activities' (*LULUCF*) called 'afforestation, reforestation and deforestation.' Kyoto Protocol, art 3.3. LULUCF alters the net GHG emissions of a country and may result in additional or reduced assigned amounts in the first as well as subsequent commitment periods. Reductions between 1990 and 2008 in 1 January 1990 carbon stocks reported to the UN Subsidiary Body for Scientific and Technological Advice are added to the assigned amount by means of RMUs, and increases are subtracted from the assigned amount: Kyoto Protocol, art 3(4).

[61] The land sector currently accounts for 23 per cent of Australia's GHG emissions.

[62] Because afforestation, reforestation and avoided deforestation projects improve the global stocks of carbon sinks, planting carbon forest sinks and improving forestry husbandry is a fertile area in Australia (and elsewhere) for generating credits (especially *voluntary emissions reductions* (*VERs*)). See, eg, T Barker et al, 'Technical Summary' in B Metz et al (eds), *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2007) 'Relative to a baseline, the largest short-term gains are always achieved through mitigation activities aimed at avoiding emissions (reduced deforestation or degradation, fire protection, slash burning, etc' (at 68). In 2009, forestry projects generated 24 per cent of voluntary market credits, doubling market share from 2008: Ecosystem Marketplace, 'Building Bridges: State of the Voluntary Carbon Markets 2010' (Forests Trends Association, 2010) iv. The UNFCCC promotes capacity building in these activities, through its *Reducing Emissions from Deforestation and Forest Degradation in Developing Countries* (*REDD, REDD+*) programs**:** Decision 2/CP.13, Reducing emissions from deforestation in developing countries: approaches to stimulate action, UN doc FCCC/CP/2007/6/Add.1*.

[63] VERs are offset credits that are the means for the monetisation of the natural benefits of carbon sequestration by trees and soil.

[64] Voluntary Carbon Standard, 'Tool for AFOLU Methodological Issues' (Policy, Voluntary Carbon Standard Association, 2008); Voluntary Carbon Standard, 'Voluntary Carbon Standard 2007.1' (Policy, Voluntary Carbon Standard Association, 2007).

[65] Australian Government, Department of Climate Change, *National Carbon Offset Standard* (2010).

AFOLU projects in Australia would, in prescribed circumstances, qualify as approved domestic offset programs and trigger the issue of free AEUs to a recognised offsets entity in accordance with Part 11A of the CPRS Bill. Section 259B of the CPRS Bill provides:

> (4) The domestic offsets program must provide that the Authority must not declare that an offsets project is an eligible domestic offsets project unless the Authority is satisfied that:
> (a) the project:
> (i) is, or is to be, carried on in Australia; and
> (ii) is covered by a domestic offsets project methodology determination; and
> (iii) meets such requirements as are set out in the applicable domestic offsets project methodology determination in accordance with paragraph 259J(1)(b); and
> (iv) meets such other requirements (if any) as are specified in the program; and
> (v) does not involve the clearing or harvesting of native forest; and
> (vi) does not involve using material obtained as a result of the clearing or harvesting of native forest

Although subject to determination, the mandatory scheme of the CPRS would operate alongside the voluntary scheme of the VCS, with AEUs replacing VERs. A project proponent would elect into the CPRS under the domestic offset program of Part 11A, and be issued free AEUs. In this sense, AEUs and VERs are equivalents, although not technically substitutes (commensurate).

Division 10 of the CPRS Bill would also provide a mechanism for voluntary opt-in to the CPRS for reforestation.[66] A reforestation project is defined as a project for the establishment, management and maintenance of one or more forest stands or a project for the management and maintenance of one or more existing forest stands: CPRS Bill, s 5. 'Forest stand' means a stand of forest, where:

> (a) under the regulations, the stand is taken to have been established by means of direct, human-induced methods; and
> (b) the stand occupies an area of land of 0.2 hectares or more; and
> (c) the stand consists of trees that:
> (i) have attained, or have the potential to attain, a crown cover of at least 20% of the area occupied by the stand; and

[66] Limited to reforestation after 1 July 2010, assuming a 1 July 2011 start date.

> (ii) have reached, or have the potential to reach, a height of at least 2 metres; and
>
> (d) either:
>
> (i) on 31 December 1989, the area occupied by the stand was clear of trees that had attained (or had the potential to attain) a crown cover of at least 20% of the area occupied by the stand and that had reached (or had the potential to reach) a height of at least 2 metres; or
>
> (ii) the area occupied by the stand was lawfully cleared of trees during the period beginning at the start of 1 January 1990 and ending at the end of 31 December 2008; and
>
> (e) the stand meets such other requirements (if any) as are specified in the regulations.[67]

ACCRA would be empowered to issue free AEUs to the person that owns the carbon stored in the trees, calculated on the net increase in carbon stores attributable to the reforestation. The person who owns the carbon sequestered in trees need not be the landowner but could also be a person with a carbon sequestration right or a holder of a crown lease. Carbon sequestration right is defined:

> For the purposes of this Act, if:
>
> (a) an area of land is Torrens system land; and
>
> (b) a person has the exclusive legal right to obtain the benefit (whether present or future) of sequestration of carbon dioxide by trees on the area of land; and
>
> (c) the right is registered under a Torrens system of registration; and
>
> (d) under a law of a State or Territory, the right is, or is taken to be, an estate or interest in land;
>
> the exclusive right is the *carbon sequestration right* held by the person in relation to the area of land.[68]

A formula would determine the allocation of free AEUs.[69] The formula, to be provided in regulations, would be a construct of the GHG removal by trees. The formula may or may not equate with actual CO_2 sequestration by trees, especially if it was to be based on an average of many trees. Forest managers would be required to report in five year periods to ACCRA, but would not have to directly measure forest carbon sequestration, because this would be modelled automatically through DCCEE's National Carbon Accounting Toolbox, using information inputted about the management of the forest, the type of forest and its location.

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[67] CPRS Bill s 5. The regulations may provide that trees and crown cover have meanings given by the regulations.

[68] Ibid s 240A(2).

[69] Ibid s 196.

In addition to the monetary value embedded in the free issue of AEUs:

- the investment in Australia in establishing the carbon forest sink may be privileged by immediate deductibility for income tax purposes of 100 per cent of the cost of establishment of trees;[70] and
- the investment in Australia in the AFOLU project may be privileged by accelerated capital allowance write-offs under s 82KZMG of the 1936 Tax Act and ss 15-45, 40-53, 40-625, 65-10, 70-120 and 385-5 of the 1997 Tax Act.

A Carbon Farming Initiative (CFI) to commence from 1 July 2011 was announced by the Prime Minister, the Hon Julia Gillard MP on 14 August 2010. As noted in s 1.3 of chapter one, the Bill for the *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) (CFI Bill) was introduced into the House of Representatives on 24 March 2011. The CFI would allow Australian farmers, forest growers and land holders access to domestic voluntary and international carbon markets. Given the absence of detail about the carbon price framework, it is unclear at this point how the CFI would interact within an Australian ETS.

A carbon crediting mechanism is proposed to generate credits (offset credits) for land sector abatement, whether or not recognised towards Australia's Annex B target in the Kyoto Protocol (thereby incentivise the unlocking of AFOLU abatement opportunities). Potential eligible abatement activities would include:

- reforestation and revegetation;
- reduced methane emissions from livestock;
- reduced fertiliser emissions;
- manure management;
- reduced emissions or increased sequestration in agricultural soils (soil carbon);
- savanna fire management;
- avoided deforestation;
- burning of stubble/crop residue;
- reduced emissions from rice cultivation; and
- reduced emissions from landfill waste deposited before 1 July 2011.[71]

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[70] 1997 Tax Act Div 40-J. From 1 July 2013, the write-off reduces to 15 per cent per annum.

[71] These activities may change as the CFI Bill progresses further through Parliament. As noted, the *Carbon Credits (Carbon Farming Initiative) Bill 2011* (Cth) has been referred to the Senate Environment and Communications Legislation Committee, who are scheduled to report by 20 May 2011.

CFI credits are to be distinguished as a ‘Kyoto Australian carbon credit unit’ (Kyoto CFI credits) and a ‘non- Kyoto Australian carbon credit unit’ (non-Kyoto CFI credits). Section 5 of the CFI Bill defines a ‘Kyoto Australian carbon credit unit’ as ‘an Australian carbon credit unit that has attributes specified in a legislative instrument made by the Minister for the purposes of this definition.’ The classification of credits into Kyoto CFI credits and non-Kyoto CFI credits would be determined by the administrator of the CFI. The credits reflect abatement recognised within the Kyoto Protocol. Kyoto CFI credits issued for abatement up to the end of the first commitment period would be exchangeable for AAUs or RMUs – thereby making them commensurate – and exportable, or saleable directly into the international voluntary market by cancelling units in the Registry on behalf of international buyers. Commodification would be further extended by recognition under NCOS, and potentially, under the CPRS.

Participation in the CFI would be limited to recognised offset entities. In order ‘to reduce the risk of fraud undermining the credibility of the scheme … the key requirement for recognition would be that the entity or offset project proponent passes a “fit and proper” person test.’[72]

The Australian Government acknowledged that some abatement activities could result in increases in emissions:

> To prevent over-crediting, material increases in emissions that are directly attributable to the abatement activity would need to be estimated and deducted from project abatement. For example, improvements in soil carbon can involve increases in nitrous oxide from fertiliser use. Further, projects can displace economic activity and therefore increase emissions outside the project boundaries. For example, reductions in deforestation in one area may be offset by increases in deforestation in other areas if the market demand for timber remains the same.[73]

In each of these AFOLU projects, commensuration may allow for gaming. AEUs issued under Part 10 and under Part 11A of the CPRS, and Kyoto CFI credits and non-Kyoto CFI credits would be a commodity abstracted from carbon sequestration. As identified in chapter one, the AEU will nonetheless represent the right to emit 1t CO_2-e, although

[72] Australian Government, Department of Climate Change and Energy Efficiency, ‘Design of the Carbon Farming Initiative Consultation Paper’ (Australian Government, Department of Climate Change and Energy Efficiency, 2010) 15.
[73] Ibid 14.

it may represent GHG emissions that are unequal, on account of the application of different formulas and standards.

The design rules may also allow for gaming. If the AEUs are issued under Part 10 of the CPRS Bill, there would no obligation upon the owner of the AEU to keep the carbon stored in the trees out of the atmosphere. Obligations in relation to carbon forest sinks are intended to remain in place for 100 years, however a reforestation project may be transferred to another eligible person. The AEU may be sold at any time. Further, forest managers may clear the carbon forest sink at any time after opting in to the CPRS. If the owner of the carbon forest sink is a corporation, there is no provision in the CPRS Bill that applies to constrain or condition the sale of shares in the corporation.

In the event that carbon stored in a carbon forest sink is released into the atmosphere, a liable entity under Part 10 would be required to relinquish AEUs to cover those emissions.[74] This design rule demonstrates the disconnection between the AEU and actual emission reductions, and reveals how the environmental objective of the CPRS could be subservient to commercial motivations. Although the AEU would be fungible, irrespective of vintage, the CPRS Bill does not specify any correlation between the monetary value received on issue of AEUs and their monetary cost upon relinquishment. Certainly, because there exists no correlation between the loss of emission reduction stored in the carbon forest sink, the cost of relinquished AEUs, and the consideration receivable for a sale of the standing timber, the potential for speculation without regard to climate objectives is evident.

In the proposed CFI, the Australian Government seeks to balance land use flexibility with emissions reduction objectives that generally require permanence (as noted, sequestered carbon is intended to be stored for 100 years). Accordingly, the 2010 consultation paper suggests that project proponents would be permitted to cancel their project and relinquish credits at any time (for example because they wish to sell or use the land for an alternative use).[75]

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[74] If the project manager fails to hand back AEUs, a forest maintenance obligation may arise, preventing further clearance of the forest. The forest maintenance obligation would be removable upon relinquishment of AEUs.

[75] The consultation paper recommends that CFI credits would have to be relinquished if the project were terminated by the administrator, carbon stores were destroyed other than through natural disturbance, or a project proponent omitted to take the steps necessary to re-establish carbon stores following a natural disturbance.

The tougher new CPRS Registry account opening requirements proposed in this thesis as part of the synchronisation rule, and the synchronisation rule, would help to tame the above gaming opportunities.

7. CONCLUSION

The six lessons presented in this chapter illustrate problems associated with commodification and trading within emissions trading schemes. This thesis does not assert they are the only problems.[76]

The case studies and lessons learned inform behaviour and potential behaviour of non-liable entities, made possible by unfettered ownership of the right to emit GHG (and aided by scheme design and commensuration).

When ownership is unfettered and non-liable entities are able to move in and out of carbon markets and between carbon markets, trading in the rights to emit GHG (AEUs, EUAs, NZUs, UEAs, AAUs, CERs, ERUs and RMUs) invites abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units, independent of the achievement of environmental objectives.

Abramowicz (1999) described the types of behaviour discussed in the case studies as 'manipulability.'

Abramowicz accepted manipulability as one of the vices of a market mechanism and warned that 'we must anticipate that … others might engage in market behaviour with ulterior motives.'[77] Solutions offered by Abramowicz to deal with manipulation included banning trading (and associated involvement) by individuals and firms who have no interest in the substantive outcome, limiting trading to preselected firms or individuals who have been identified as having no or de minimis interest in a particular market, and the use of 'stiff' civil or criminal penalties.[78]

The thesis offers the synchronisation rule and enhanced carbon market integrity regime. These proposed legislative amendments are the subject of chapter five.

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[76] For example, other problems have included manipulation of results: see J de Sepibus, 'The environmental integrity of the CDM mechanism - A legal analysis of its institutional and procedural shortcomings' (NCCR Trade Regulation Working Paper 2009/24, Swiss National Centre of Competence in Research, 2009); Emma Lund, 'Dysfunctional delegation: why the design of the CDM's supervisory system is fundamentally flawed' (2010) 10 *Climate Policy* 277; Lohmann, 'Climate Crisis', above n 42.
[77] Abramowicz, above n 27, 389.
[78] Ibid 391.

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CHAPTER 5

SYNCHRONISATION RULE AND ENHANCED CARBON MARKET INTEGRITY REGIME

This chapter introduces the legislation for the proposed synchronisation rule and the enhanced carbon market integrity regime, and explains how they address the lessons to be learned from contemporary emissions trading schemes.

The de Larosière (2009) report titled 'The High Level Group on Financial Supervision in the EU' answered the question 'what should be the right focus when designing regulation?' by saying that:

> It should concentrate on the major sources of weaknesses of the present set-up (e.g. dealing with financial bubbles, strengthening regulatory oversight on institutions that have proven to be poorly regulated, adapting regulatory and accounting practices that have aggravated pro-cyclicality, promoting correct incentives to good governance and transparency, ensuring international consistency in standards and rules as well as much stronger coordination between regulators and supervisors).[1]

The legislative recommendations of this thesis are properly focused.

The synchronisation rule proposed by this thesis is a pre-emptive rule: that is, it is a rule fashioned to affect and modify behaviour before it occurs.

The enhanced carbon market integrity regime proposed by this thesis embodies retro-active rules: that is, they are rules operative once an observed behaviour has occurred.

The CPRS Bill was under consideration by the Houses of Parliament during the GFC. However, the design of the CPRS was not updated to account for the GFC,[2] or for the new paradigm for market oversight that arose in its wake. The discussion in this chapter provides a counter-point for the post-GFC update on market oversight that is the subject of chapter seven.

This thesis asserts that the proposed synchronisation rule and the proposed enhanced carbon market integrity regime would improve the fair and orderly operation of an Australian carbon market.

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[1] The de Larosière Group, 'Report of the High Level Group on Financial Supervision in the EU' (Report, The de Larosière Group, 2009) 13.

[2] Henry Derwent (2010), the President of the International Emissions Trading Association (IETA) suggests that 'the efficiency of [emissions] trading – has perhaps seen the greatest reverses. This is deeper than the moral outrage over the behaviour of trades in other markets, particularly when those markets have failed spectacularly.' See Henry Derwent, 'What's Wrong with Emissions Trading' (Beesley Lecture delivered at the Institute of Directors, London, 30 September 2010) 11 (interpolation added).

1. SYNCHRONISATION RULE

As noted in chapter one, there is no synchronisation rule in the proposed CPRS Bill, nor in the Corporations Act or draft Corporations Regulations.

A synchronisation rule in the CPRS Bill would tie obligations under the CPRS Bill with beneficial ownership of an AEU. The linking would be achieved by:

- strengthening the requirements for opening a Registry account, by inserting in s 147 of the CPRS Bill new subsections (ca) and (cb) in s 2 and new s (8a) (see box 5.1); and
- inserting a new Part 3A deeming certain non-liable entities to be liable entities within Part 3 of the CPRS Bill (see box 5.2).

Under the synchronisation rules, an applicant who applies to open a Registry account would be required to:

- apply for a greenhouse gas emissions permit issued by ACCRA; and
- in a statutory declaration to ACCRA:
    - affirm that the opening of the Registry account is for the purposes of the CPRS Bill;
    - disclose whether it is intended that the applicant shall be holding eligible emissions units in the Registry account for surrender, cancellation or for sale;
    - disclose any prior criminal conviction or civil penalties, and if the applicant is an non-individual entity, any criminal conviction or civil penalties against its directors;
    - agree that acquisition of Australian emissions units may result in a liability under the CPRS Bill (and consequently, the requirement to surrender AEUs); and
    - acknowledge that failure to adhere to Registry account rules or meet any liabilities under the CPRS Bill may attract civil and administrative penalties and suspension or forfeiture of the Registry account.

ACCRA would need to be satisfied that the person would monitor and report emissions and was capable of holding sufficient eligible emissions units to cover their expected emissions.

Subsection (2)(ca) (and new s (8a)) in s 147 are modelled on (amended) Articles 5 and 6 of Commission Directive (EC) 87 of 2003[3] and replicate the aims of s 727 of the APA. New s 2(cb) is modelled in part upon the ANREU Terms and Conditions governing the opening of a Registry account within the Australian National Registry of Emissions Units, which form part of the agreement between an account holder and DCCEE in relation to a Registry account.

New sub-ss 147(2)(ca) and (cb) would operate in addition to the regulations to be made pursuant to sub-ss 147(2) and 147(8) of the CPRS Bill (as per the CPRS draft regulations discussed in s 2.1A of chapter one) and/or ss 9 and 10 of the Australian National Registry of Emissions Units Bill 2011 (Cth) (discussed in s 2.1B of chapter one).

The new subsections would prescribe for more robust information to be provided in order to open a Registry account (more than, for example, mere proof of identification). An additional requirement to obtain a GHG emission permit and to affirm, agree and acknowledge, and disclose and declare (supported by verification by statutory declaration under s 147(3)) imports a greater burden of obligation than merely providing proof of identification.

The affirmation, agreement and acknowledgment, and disclosure and declaration empower wide discretion in ACCRA to refuse to open a Registry account.[4] For example, the making of a false statement would directly expose a person to criminal prosecution under the *Criminal Code Act 1995* (Cth) (including jail up to 10 years for defrauding the Commonwealth). The application for a permit, the declarations and the wide discretion in ACCRA to be satisfied that the applicant is a fit and proper person would empower ACCRA to review the previous trading history of the applicant and to determine if the opening of the Registry account might be for illegal or undesirable purposes. Prior evidence that a person had been responsible for market abuse, theft, fraud, manipulation or other prohibited conduct could justify refusing an account.

[3] Based on the EU ETS auction regulations (discussed in s 2.5B of chapter two), and taking account of amendments proposed by the draft EU Registry Regulations issued 5 May 2011. The new proposed EU Registry account regulations are discussed in chapter seven.
[4] The new powers would be wider than the power contemplated in sub-s 16(6) of the *Australian National Registry of Emissions Units Bill 2011* (Cth) to refuse to open an Registry account for an applicant who previously has had a Registry account closed.

Box 5.1: Proposed new legislation: Registry accounts

Amendments to section 147 of the CPRS Bill, crafted in the style of amending legislation. To be read in conjunction with the CPRS Bill.

Part 7, Division 3 – Registry Accounts

Section 147 – Opening of Registry accounts - general

After sub-section 2(c), insert:

(ca) be accompanied by an application by the person requesting the Authority to issue a greenhouse gas emission permit to the person;

(cb) be accompanied by a statement by the person in which the person:

i. affirms that the opening of the Registry account is for the purposes of the Act; and

ii. discloses whether it is intended that the person shall be holding eligible emissions units in the Registry account for surrender, cancellation or for sale; and

iii. discloses any prior criminal conviction or civil penalties, and if the applicant is an non-individual entity, any criminal conviction or civil penalties against its directors; and

iv. declares and agrees that the person (or the person or entity for whose benefit eligible emissions units are to be held) is not or will not:

    A. attempt to damage or corrupt (including the introduction of any virus, Trojan, worm, logic bomb or other material which is malicious or technologically harmful) any software or data used in connection with any part of the Registry;

    B. attempt to gain unauthorised access to the Registry, the server on which the Registry is stored or any server, computer or database connected to the Registry;

    C. engage in any market manipulation; and

    D. transfer to another Registry account or to a Foreign account any eligible emissions units that the account holder knows, or should reasonably know, have been erroneously transferred to the account holder's Registry account or do not rightly belong to the account holder; and

v. agrees that acquisition of Australian emissions units may result in a liability under this Act; and

vi. acknowledges that a false statement may be punishable by criminal prosecution and that failure to meet any liabilities under this Act or regulations attract civil and administrative penalties and suspension or forfeiture of Registry account privileges.

After sub-section (8), insert:

Conditions for greenhouse gas emissions permit

(8a) The Authority must not issue a greenhouse gas emission permit in the name of the person unless the Authority is satisfied that the person is a fit and proper person and is capable of:

i. monitoring and reporting emissions; and

ii. holding eligible emissions units in a quantity that is at least equal to the forecast total annual emissions number of the person.

ACCRA would be able to decline to open a Registry account if:

- the affirmation, agreement and/or acknowledgment were not provided; or
- ACCRA had reasonable grounds for being satisfied that the applicant was not a fit or proper person to hold a Registry account; or
- ACCRA had reasonable grounds for being satisfied that the person would not be able to hold sufficient eligible emissions units to cover expected emissions.

The proposed synchronisation rule would insert a new Part 3A into the CPRS Bill.

Any entity that was not already a liable entity and that owned an AEU for the whole or part of an eligible financial year would be deemed to be a liable entity.

Part 3A conditions ownership by non-liable entities (called *Part 3A entities*) with obligations under the CPRS Bill (see Box 5.2).

The part achieves its objective by deeming Part 3A entities to be a liable entity for the purposes of Part 3 of the CPRS Bill. Part 3A entities are persons who are not liable entities under Part 3 *per se*. *Critically, they are persons (including legal entities) who have at any time during an eligible financial year held an AEU which has not been cancelled by 15 December in the subsequent eligible financial year (by anyone, for example, by surrender to ACCRA or by cancellation or relinquishment).*

Any non-liable entity that holds or trades an AEU is potentially captured, if their emissions exceed the threshold. They face the same liability as liable entities.

Now treated as a liable entity, the Part 3A entity is liable to surrender eligible emissions units equal to an attributable emissions number, in the same manner as other liable entities (subject to applying, pro-rata, the small facilities exemption). Thus, in order to avoid an exposure to liability where AEUs are disposed, the non-liable entity must know the surrender intentions of the buyer of the AEUs.[5]

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[5] It should be noted that the use of a synchronisation rule is not the same as designing an emissions trading scheme with universal coverage.

Box 5.2: Synchronisation rule

Amendments to insert a new Part 3A into the CPRS Bill, crafted in the style of amending legislation. To be read in conjunction with the CPRS Bill.

Part 3A – Extending Liability to Certain Non-Liable Entities

Division 1 – Simplified Outline

81A Simplified Outline

The following is a simplified outline of this Part:

This Part identifies persons who are not liable entities under Part 3 and who have at any time during a financial year held an interest in any Australian emissions unit which has not been cancelled (these persons are called Part 3A entities). A Part 3A entity that holds or sells an interest in an Australian emissions unit is brought by this part into the liability and shortfall provisions of the Act.

If a Part 3A entity has an attributable provisional emissions number of one or more for the financial year, the Part 3A entity is deemed to be a non-group entity. As a liable entity, a Part 3A entity is liable to surrender eligible emissions units equal to an attributable emissions number, in the same manner as other liable entities.

Division 2 – Synchronisation Rule

81B Application to certain holders of Australian emissions units

Scope

1) This Part applies if:
   a) a person is not a liable entity under Part 3; and
   b) the person held an interest in an Australian emissions unit for a number of days (including part of a day) in an eligible financial year (the ***control days***); and
   c) the person has not requested the Authority to cancel or the Authority has not cancelled the Australian emissions unit under Part 14 by the end of 15 December in the next eligible financial year (whether or not the person holds the Australian emissions unit as at the end of 15 December); and
   d) the person has an ***attributable provisional emissions number*** of one or more for the eligible financial year.

Note: See also section 81C.

Liable Entity

2) For the purposes of this Act, and subject to section 81E, a person to whom this Part applies (a ***Part 3A entity***) is a ***liable entity*** for the eligible financial year.

81C Attributable provisional emissions number

A Part 3A entity has an attributable provisional emissions number if the total amount of scope 1 greenhouse gases emitted by the Part 3A entity during the control days has a carbon dioxide equivalence of a particular number of tonnes.

81D Rule modifications for Part 3A entities

Emission of greenhouse gas

1) For the purposes of section 24 of the Act the direct release of greenhouse gas into the atmosphere by a Part 3A entity:
   a) is attributable to the operation of a facility (other than a landfill facility); and
   b) is a scope 1 emission of greenhouse gas.

Non-group entity

2) A Part 3A entity is a non-group entity.

Emissions number

3) For the purposes of section 125 of the Act, the provisional emissions number for a Part 3A entity is the Part 3A entity's attributable provisional emissions number.

81E Pro-rating small facilities exemption

If the attributable provisional emissions number of a Part 3A entity is less than the amount worked out using the formula:

$$25{,}000 \text{ tonnes} \times \frac{\text{Number of control days}}{\text{Number of days in the eligible financial year}}$$

the Part 3A entity shall not be a liable entity.

The synchronisation rule proposes a tighter constraint than the EU ETS auction regulation and draft EU Registry regulations closing the EU ETS to operators and authorised investment firms or the APA proposal to close the US ETS to liable entities and regulated GHG market participants. It will be recalled that regulated GHG market participants and authorised investment firms would not be liable entities under the EU ETS or the US ETS, respectively. *In contrast*, as a deemed liable entity, the owner of the AEU would be required – on a pro-rata basis in the same manner as liable entities – to monitor, report and acquit scope 1 emissions. Their liability would be attributable to the period during which they owned the AEU.

As for all liable entities, the acquittal would require the surrender of sufficient eligible emissions units, and in the event of a unit shortfall, there would be a unit shortfall penalty and make-good.

Neither the Australian Government in the Green Paper or the White Paper, nor the Garnaut Review, specifically addressed the risks to the CPRS in the absence of a synchronisation rule. Reliance on the principle of scarcity to justify unfettered ownership of AEUs ignores risks that identified aberrant behaviour would occur in Australia. *In contrast*, the synchronisation rule reflects how commodification of the right to emit GHG should be conditioned for non-liable entities. Obligations for Part 3A entities under the Australian ETS are tied to ownership of an AEU and emissions above the threshold.

2. CARBON MARKET INTEGRITY REGIME

An enhanced carbon market integrity regime would supplement Australia's market regulatory framework and provide extensive investigation and information gathering powers to ACCRA. In particular, rules for improved market oversight would increase the threat of real-time regulator intervention. Short-fall penalties coupled with make-good for unit shortfalls by non-liable entities would also encourage acceptable market behaviour. The behaviour of all owners of AEUs would be conditioned by such a regime.

A new Part 19A of the CPRS Bill would embrace rules for carbon market integrity and oversight fashioned upon similar provisions in the APA that proposed to amend the *Commodity Exchange Act* (US).

A carbon markets advisory committee would be established.[6] Acting on advice from the carbon market advisory committee, ACCRA (or if delegated, ASIC) could intervene in the carbon market to provide protection to the Australian market and its market participants. The market intervention powers of ACCRA would extend the current provisions contained in the CPRS Bill, the Corporations Act and the draft proposed amendments to the Corporations Regulations to empower ACCRA to:

- limit participation in the carbon market to liable entities and authorised greenhouse gas market participants; and
- declare a carbon market emergency which may permit the authority to suspend trading and cancel irregular trades, and/or make restoration orders.

The aim of market intervention is the maintenance of a fair and orderly carbon market, and hence discouragement of abusive and predatory behaviour. Mr Bart Chilton, Commissioner of the US Commodities Futures Trading Commission (CFTC) argues that these types of intervention powers would permit the regulator to be 'quick and nimble' and 'to keep up with the [trading] cheetahs' and 'massive passives.'[7]

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[6] Arguably, a carbon markets advisory committee would operate like the European Securities and Markets Authority (*ESMA*). For a discussion of the role and powers of ESMA, see especially Niamh Moloney, 'The European Securities and Markets Authority and Institutional Design for the EU Financial Market - A Tale of Two Competences: Part (1) Rule-Making' (2011) 12 *European Business Organization Law Review* 41. The Capital Markets Advisory Committee (*CAMAC*) is a similar concept in Australia.

[7] Bart Chilton, 'New Species: How Market Participants have Evolved in Financial Ecosystems' (Speech delivered at the American Public Gas Association, Winter Conference, Fort Myers, 1 February 2011).

Box 5.3: Market integrity regime

Amendments to insert a new Part 19A into the CPRS Bill, crafted in the style of amending legislation. To be read in conjunction with the CPRS Bill.

Part 19A – Market Intervention Powers

Division 1 – Simplified Outline

322A Simplified Outline

The following is a simplified outline of this Part:

- The Minister acting upon advice from the carbon market advisory committee may determine to limit participation in the greenhouse gas market to liable entities and regulated greenhouse gas market participants.
- The Minister may declare a greenhouse gas market emergency.
- In a greenhouse gas market emergency the Minister may:
  - suspend trading; and
  - apply to the Federal Court of Australia for an order to cancel irregular trades.

Division 2 – Carbon Market Advisory Committee

322B Establishment of carbon market advisory committee

1) The Minister may, by writing, establish a committee to be known as the carbon market advisory committee.

Note: For variation and revocation, see section 33(3) of the *Acts Interpretation Act 1901*.

2) An instrument made under section (1) is not a legislative instrument.

322BA Functions of carbon market advisory committee

The carbon market advisory committee has the functions that are conferred on it by this Part.

322BB Membership of carbon market advisory committee

The carbon market advisory committee consists of the following members:

a) a Chair;
b) at least 2, but not more than 4, other members.

322BC Appointment of carbon market committee members

1) Each carbon market advisory committee member is to be appointed by the Minister by written instrument.

Note: A carbon market advisory committee member is eligible for reappointment: see section 33(4A) of the *Acts Interpretation Act 1901*.

2) A person is not eligible for appointment as a carbon market advisory committee member unless the Minister is satisfied that the person has:
   a) substantial experience or knowledge; and
   b) significant standing in at least one of the following fields:
      i. economics;
      ii. law;

Chilton defines cheetah traders as high frequency and algorithmic traders, and massive passives as speculators with concentrated speculative interests.

iii. Australian industry;
iv. financial markets;
v. trading of environmental instruments.

3) The Minister must ensure that:
   a) the Chair of the carbon market advisory committee is not a person covered by sub-section (4); and
   b) a majority of the other carbon market advisory committee members are not persons covered by sub-section (4).
4) This section applies to the following persons:
   a) an employee of the Commonwealth;
   b) an employee of an authority of the Commonwealth;
   c) a person who holds a full-time office under a law of the Commonwealth.
5) A person is not eligible for appointment as a carbon market advisory committee member if the person is a director, officer or employee of another person who is a liable entity or regulated greenhouse gas market participant for the eligible financial year in which the appointment is made.
6) A carbon market advisory committee member holds office on a part-time basis.

322BD Period for appointment for carbon market advisory committee members

A carbon market advisory committee member holds office for the period specified in the instrument of appointment. The period must not exceed 5 years.

Note: For re-appointment, see section 33(4A) of the *Acts Interpretation Act 1901*.

322BE Acting carbon market advisory committee members

Acting Chair of carbon market advisory committee

1) The Minister may appoint a carbon market advisory committee member to act as the Chair of the carbon market advisory committee:
   a) during a vacancy in the office of the carbon market advisory committee Chair (whether or not an appointment has previously been made to the office); or
   b) during any period, or during all periods, when the Chair of the carbon market advisory committee:
      i. is absent from duty or from Australia; or
      ii. is, for any reason, unable to perform the duties of the office.

Acting carbon market advisory committee member (other than the Chair)

2) The Minister may appoint a person to act as a carbon market advisory committee member (other than the Chair of the carbon market advisory committee):
   a) during a vacancy in the office of a carbon market advisory committee member (other than the Chair of the carbon market advisory committee), whether or not an appointment has previously been made to the office; or
   b) during any period, or during all periods, when a carbon market advisory committee member (other than the Chair of the carbon market advisory committee):
      i. is absent from duty or Australia; or
      ii. is, for any reason, unable to perform the duties of the office.

Eligibility

3) A person is not eligible for appointment to act as:
   a) the Chair of the carbon market advisory committee; or
   b) a carbon market advisory committee member (other than the Chair of the carbon market advisory committee);
   c) unless the person is eligible for appointment as a carbon market advisory

committee member.

Note: See section 322BC(2).

Validation

4) Anything done by or in relation to a person purporting to act under an appointment is not invalid merely because:
   a) the occasion for the appointment had not arisen; or
   b) there was a defect or irregularity in connection with the appointment; or
   c) the appointment ceased to have effect; or
   d) the occasion to act had not arisen or had ceased.

Note: See sections 20 and 33A of the *Acts Interpretation Act 1901*.

322BF Procedures

1) The regulations may prescribe the procedures to be followed at or in relation to meetings of the carbon market advisory committee, including matters relating to the following:
   a) the convening of meetings of the carbon market advisory committee;
   b) the number of carbon market advisory committee members who are to constitute a quorum;
   c) the selection of a carbon market advisory committee member to preside at meetings of the carbon market advisory committee in the absence of the Chair of the carbon market advisory committee;
   d) the manner in which questions arising at a meeting of the carbon market advisory committee are to be decided.
2) A resolution is taken to have been passed at a meeting of the carbon market advisory committee if:
   a) without meeting, a majority of carbon market advisory committee members indicate agreement with the resolution in accordance with the method determined by the carbon market advisory committee under section (3); and
   b) all carbon market advisory committee members were informed of the proposed resolution, or reasonable efforts had been made to inform all carbon market advisory committee members of the proposed resolution.
3) Subsection (2) applies only if the carbon market advisory committee:
   a) determines that it applies; and
   b) determines the method by which carbon market advisory committee members are to indicate agreement with resolutions.

322BG Disclosure of interests to the Minister

A carbon market advisory committee member must give written notice to the Minister of all interests, pecuniary or otherwise, that the member has or acquires and that conflict or could conflict with the proper performance of the member's functions.

322BH Disclosure of interests to carbon market advisory committee

1) A carbon market advisory committee member who has an interest, pecuniary or otherwise, in a matter being considered or about to be considered by the carbon market advisory committee must disclose the nature of the interest to a meeting of the carbon market advisory committee.
2) The disclosure must be made as soon as possible after the relevant facts have come to the carbon market advisory committee member's knowledge.
3) The disclosure must be recorded in the minutes of the meeting of the carbon market advisory committee.
4) Unless the carbon market advisory committee otherwise determines, the carbon market advisory committee member:

a) must not be present during any deliberation by the carbon market advisory committee on the matter; and
b) must not take part in any decision of the carbon market advisory committee with respect to the matter.

5) For the purposes of making a determination under section (4), the carbon market advisory committee member:
   a) must not be present during any deliberation of the carbon market advisory committee for the purpose of making the determination; and
   b) must not take part in making the determination.
6) A determination under section (4) must be recorded in the minutes of the meeting of the carbon market advisory committee.

322BI Outside employment

A carbon market advisory committee member must not engage in any paid employment that conflicts or may conflict with the proper performance of his or her duties.

322BJ Remuneration and allowances

1) A carbon market advisory committee member is to be paid the remuneration that is determined by the Remuneration Tribunal. If no determination of that remuneration by the Tribunal is in operation, the member is to be paid the remuneration that is prescribed.
2) A carbon market advisory committee member is to be paid the allowances that are prescribed.
3) This section has effect subject to the *Remuneration Tribunal Act 1973*.

322BK Leave of absence

1) The Minister may grant leave of absence to the Chair of the carbon market advisory committee on the terms and conditions that the Minister determines.
2) The Chair of the carbon market advisory committee may grant leave of absence to a carbon market advisory committee member on the terms and conditions that the Chair determines.

322BL Resignation

1) A carbon market advisory committee member may resign his or her appointment by giving the Minister a written resignation.
2) The resignation takes effect on the day it is received by the Minister or, if a later day is specified in the resignation, on that later day.

322BM Termination of appointment

1) The Minister may terminate the appointment of a carbon market advisory committee member for misbehaviour or physical or mental incapacity.
2) The Minister may terminate the appointment of a carbon market advisory committee member if:
   a) the member:
      i. becomes bankrupt; or
      ii. applies to take the benefit of any law for the relief of bankrupt or insolvent debtors; or
      iii. compounds with his or her creditors; or
      iv. makes an assignment of remuneration for the benefit of his or her creditors; or
   b) the member is absent, except on leave of absence, for 3 consecutive meetings of the carbon market advisory committee of which he or she is a member; or
   c) the member engages in paid employment that conflicts or may conflict

with the proper performance of his or her duties (see section 322BI); or
    d) the member fails, without reasonable excuse, to comply with section 322BG or 322BH.

3) The Minister may terminate the appointment of the Chair of the carbon market advisory committee if the Chair is:
    a) an employee of the Commonwealth; or
    b) an employee of an authority of the Commonwealth; or
    c) a person who holds a full-time office under a law of the Commonwealth.
4) The Minister may terminate the appointment of a carbon market advisory committee member if the member is a director, officer or employee of another person who is, or is likely to be, a liable entity or regulated greenhouse gas market participant for the eligible financial year in which the termination occurs.

322BN Other terms and conditions

A carbon market advisory committee member holds office on the terms and conditions (if any) in relation to matters not covered by this Act that are determined by the Minister.

322BO Assistance to carbon market advisory committee

1) Any or all of the following:
    a) the Authority;
    b) the Department;
    c) any other Department, agency or authority of the Commonwealth;

    may assist the carbon market advisory committee in the performance of its functions.
2) The assistance may include the following:
    a) the provision of information;
    b) the provision of advice;
    c) the making available of resources and facilities (including secretariat services and clerical assistance).

322BQ Consultants

1) The Chair of the carbon market advisory committee may, on behalf of the Commonwealth, engage persons having suitable qualifications and experience as consultants to the committee.
2) The consultants are to be engaged on the terms and conditions that the Chair determines in writing.

Division 3 – Regulation of Participation in Carbon Market

322C Periodic reviews of trading of Australian emissions units

1) Reviews of the following matters are to be conducted by the carbon market advisory committee:
    a) the status of, and historic and likely future trends in, the Australian greenhouse gas markets, including prices, trading volumes, transaction types, and trading channels and mechanisms;
    b) spikes, collapses, and volatility in prices of Australian emissions units, and the causes;
    c) the relationship between the market for Australian emissions units and their derivatives, and the spot and futures markets for energy commodities, including electricity;
    d) the economic effects of the greenhouse gas markets, including macro- and micro-economic effects of unexpected significant increases and decreases in the price of Australian emissions units;

e) any changes in the roles, activities, or strategies of liable entities, regulated greenhouse gas market participants and other participants in the greenhouse gas market;
f) regional, industrial, and consumer responses to the greenhouse gas markets, and energy investment responses to the greenhouse gas markets;
g) any other issue related to the greenhouse gas markets that the carbon market advisory committee deems appropriate; and
h) such other matters (if any) that:
    i. are specified in a written instrument given by the Minister to the Chair of the carbon market advisory committee; and
    ii. relate to the carbon pollution reduction scheme or greenhouse gas markets.

Period of review

2) Each review period must be of the most recent six months activity in the greenhouse gas markets.

Timing of reviews

3) The first review must be completed before the end of 31 July 2013.
4) Each subsequent review must be completed within one month after 30 June or 31 December as the case may be.
5) For the purposes of subsections (3) and (4), a review is completed when the report of the review is given to the Minister under section 322CA.

Consultation

6) In conducting a review, the carbon market advisory committee must make provision for public consultation.

Relevant matters

7) In conducting a review, the carbon market advisory committee must have regard to:
    a) any policies of the Commonwealth Government notified to the carbon market advisory committee by the Minister; and
    b) such other matters as the carbon market advisory committee considers relevant.

Instrument

8) An instrument given under paragraph (1)(h) is not a legislative instrument.

322CA Report of periodic review

1) The carbon market advisory committee must:
    a) prepare a report of a review under section 322C; and
    b) give the report to the Minister.
2) The Minister must cause copies of the report to be tabled in each House of the Parliament within 15 sitting days of that House after receiving the report.

Recommendations

3) Without limiting the recommendations of the carbon market advisory committee, the report may set out recommendations to the Commonwealth Government:
    a) to improve the functioning or orderly conduct of the greenhouse gas market;
    b) to improve the effectiveness of the Australian carbon price framework;
    c) to limit participation in the greenhouse gas market; and
    d) to ban from the greenhouse gas market persons (including for the

avoidance of doubt liable entities and regulated greenhouse gas market participants) proved to have unreasonably caused spikes, collapses, and volatility in prices of Australian emissions units in the greenhouse gas market.

4) In formulating a recommendation that the Commonwealth Government should take particular action, the carbon market advisory committee must assess the costs and benefits of that action.
5) Subsection (4) does not prevent the carbon market advisory committee from taking other matters into account in formulating a recommendation.

Government response to recommendations

6) If a report sets out one or more recommendations to the Commonwealth Government:
   a) as soon as practicable after receiving the report, the Minister must cause to be prepared a statement setting out the Commonwealth Government's response to the recommendations; and
   b) within 2 months after receiving the report, the Minister must cause copies of the statement to be tabled in each House of the Parliament.
7) The Commonwealth Government's response to the recommendations may have regard to the views of the following:
   a) the Authority;
   b) such other persons as the Minister considers relevant.
8) If recommended in the report of the carbon market advisory committee and accepted by the Commonwealth Government in its response to the recommendation, the Minister may determine, by legislative instrument:
   a) to limit participation in the greenhouse gas market (from a date not less than two years after making the determination) to liable entities and regulated greenhouse gas market participants; and
   b) to declare for the purposes of the definition of participants in section 761A(b) of the *Corporations Act 2001* that liable entities and regulated greenhouse gas market participants shall be participants from the date declared.

Division 4 – Carbon Market Emergency

322D Definition of greenhouse gas market emergency

In this Part, ***greenhouse gas market emergency*** means—

1) a major market disturbance characterized by or constituting—
   a) sudden and excessive fluctuations of prices of Australian emissions units (or a substantial threat of such sudden and excessive fluctuations) that threaten fair and orderly markets; or
   b) a substantial disruption of the safe or efficient operation of the national system for clearance and settlement of transactions in Australian emissions units (or a substantial threat of such a disruption); or
2) a major disturbance that substantially disrupts, or threatens to substantially disrupt—
   a) the functioning of markets in Australian emissions units, or any significant portion or segment of the markets; or
   b) the transmission or processing of transactions in Australian emissions units.

322DA Declaration of greenhouse gas market emergency

Declaration by Minister

1) The Minister, acting on the advice of the carbon market advisory committee

and the Authority, may declare a greenhouse gas market emergency.

Effective period

2) A greenhouse gas market emergency declaration under this section:
   a) shall continue in effect for the period specified by the Minister;
   b) may be extended in accordance with section (3); and
   c) except as provided in section (3), may not continue in effect for more than 30 business days, including extensions.

Extension

3) A greenhouse gas market emergency declaration may be extended by the Minister to continue in effect for more than 30 business days, but in no event may continue in effect for more than 60 calendar days, if, at the time of the extension, the Minister determines that:
   a) the greenhouse gas market emergency still exists; and
   b) the continuation of the declaration for more than 30 business days is necessary in the public interest to attain an efficient, fair and orderly functioning greenhouse gas market.

322DB Powers of Minister

Trading suspensions

1) If the Minister determines that the public interest so requires, the Minister may, by order, summarily suspend all trading of Australian emissions units on any greenhouse gas market for a period not to exceed 30 calendar days.

Other suspensions

2) The Minister may, by order, summarily take such action to alter, supplement, suspend, or impose requirements or restrictions with respect to any matter or action subject to regulation by this Part, as the Minister determines is necessary and in the public interest:
   a) to maintain or restore fair and orderly markets in Australian emissions units; or
   b) to ensure prompt, accurate, and safe clearance and settlement of transactions in Australian emissions units.

Division 5 – Restorative Justice Powers

322E Compliance with Ministerial orders

No person shall effect any transaction in, or induce the purchase or sale of, any Australian emissions unit in contravention of a greenhouse gas market emergency declaration by the Minister.

Civil penalty: 10,000 penalty units.

322F Review by Federal Court

A person affected by a declaration of a greenhouse gas market emergency who is dissatisfied with the decision may apply to the Federal Court of Australia for an order of review in respect of the decision.

322G Reversal of irregular trades

1) If, before or after a greenhouse gas market emergency has been declared, a person has engaged, or is engaging, in any dealing in or with respect to any Australian emissions unit, or has induced, or is inducing, the purchase or sale of any Australian emissions unit (called *irregular trades*) the Federal Court may make an order (a reversal order) cancelling the irregular trade or irregular trades and requiring the person to take action (the remediation action) to make

good any loss of any other person adversely affected by the irregular trade and to restore the financial position of that person to the position the affected person would have been in had the irregular trade not occurred.

2) In considering whether to grant a reversal order, the matters to which the Federal Court may have regard include (but are not limited to) the following:
   a) the nature and extent of the irregular trade;
   b) the nature and extent of the damage to the other person that may or will be, or that has been, caused by the irregular trade;
   c) the circumstances in which the irregular trade took place;
   d) whether the person has previously been found by a court in proceedings under this Act or the regulations to have engaged in any similar conduct; and
   e) the gain made by the person as a result of the irregular trade and the cost to the person of taking the reversal action.
3) If the Federal Court makes a reversal order, it may also make an order requiring the person to provide security for the due taking of the reversal action.
4) Application to the Federal Court for a reversal order may only be made by the Minister.

Division 6 – Miscellaneous

322H Definitions

In this Part:

abusive trades means any trading or holding of Australian emissions units or their derivatives that singularly or cumulatively expose the greenhouse gas market to:

a) sudden and excessive fluctuations of prices of Australian emissions units (or a substantial threat of such sudden and excessive fluctuations) that threaten fair and orderly markets; or
b) a substantial disruption of the safe or efficient operation of the national system for clearance and settlement of transactions in Australian emissions units (or a substantial threat of such a disruption); or
c) a major disturbance that substantially disrupts, or threatens to substantially disrupt—
   i. the functioning of markets in Australian emissions units, or any significant portion or segment of the markets; or
   ii. the transmission or processing of transactions in Australian emissions units.

liable entity means a person who, under a provision of this Act, is a liable entity, and for the avoidance of doubt, includes a Part 3A entity.

regulated greenhouse gas market participant means a person (other than a liable entity) determined by the Minister, in conjunction with the Authority, based on an assessment of the greenhouse gas market structure and an assessment that participants in the greenhouse gas market additional to liable entities are necessary for a liquid and well-functioning greenhouse gas market, who, if the person participated in the greenhouse gas market, would improve the functioning and orderly conduct of the greenhouse gas market and ensure not more than a reasonable rate of economic return would be achieved in the greenhouse gas market.

Market intervention powers are by their nature retro-active, however in order to match the pace of the modern markets, Part 19A attempts to permit ACCRA to intervene in real-time in certain circumstances. Division 4 of proposed Part 19A is therefore directly drawn from the ACES Act amendments proposed to the Federal Power Act, discussed in s 3.6.1 above.

A determination by the Minister to limit participation in the carbon market to liable entities and regulated GHG market participants (and therefore define them as participants for Corporations Act purposes) would close the carbon market. In these circumstances, the synchronisation rule would still operate to deem regulated GHG market participants to be Part 3A liable entities, thus ensuring a level playing field in the carbon market.

3. LESSONS LEARNED – APPLYING THE NEW RULES

Within public interest theory, the proposed legislative interventions – framed as an anti-abuse response – will be recognisable as a market maintenance intervention. Chapter six analyses the public interest in orderly carbon markets and affirms that the synchronisation rule and enhanced carbon market regime are justified in the public interest. The synchronisation rule and enhanced carbon market integrity regime are next applied to the lessons learned from operational emissions trading schemes in chapter four.

3.1 Lesson 1 – closing off cross-border and cross-market arbitrage

In an international arena in which States compete to promote their national industries and commerce, a synchronisation rule and enhanced carbon market integrity regime would help arrest the extent of gaming, and fraud, manipulation and excessive speculation in AEUs by international non-liable entities.

At its third meeting on 21 December 2010, the MPCCC agreed principles to guide the development of a carbon price mechanism and reflected Australia's national self-interest in ETS design in these terms:[8]

> 4. **Competitiveness of Australian industries**: The overall package of carbon price design and associated assistance measures should *take appropriate account of impacts on the competitiveness of all Australian industries*, *having regard to carbon prices in other countries*, while maintaining incentives to reduce pollution. …
> 8. **Flexibility**: Internationally, climate change policy is continuing to

[8] Multi-Party Climate Change Committee, 'Status of Global Mitigation Action: Current targets and policies in key countries' (Communiqué of Multi-Party Climate Change Committee, 10 November 2010) (emphasis added).

> evolve. *A mechanism to price carbon should be sufficiently flexible to respond to changing international circumstances*, including improvements in international accounting rules, developments in climate change science, *and tangible international action to deliver an effective global solution*.

The synchronisation rule and enhanced carbon market integrity regime would be consistent with the protection of Australia's self-interest.

At their essence, the proposed rules would protect the Australian carbon market from cross-border and cross-market arbitrage by discouraging the disconnection between emissions reduction and ownership of the right to emit GHG in Australia (i.e. the AEU). Speculation and activity that disrupts the market, undertaken for motives divorced from emissions reductions or liability under the Australian ETS, would not help deliver the change in behaviour which the Australian Government expects by pricing carbon. Accordingly, the proposed legislative improvement posited by this thesis fits with scheme design, complementing the combination of the cap in the ETS, and the price signal expected to be delivered by the market.

3.2 Lesson 2 – combating crime

Persons minded to commit theft or fraud may not be deterred by any rule of law. But a key lesson to be learned from operational emissions trading schemes is that unfettered ownership of emissions units, and the ability to open a Registry account, actually facilitates such aberrant behaviour.

This thesis asserts that the synchronisation rule and enhanced carbon market integrity regime would be a disincentive to potential criminals because of the potential to be captured by the Regulator, who would have significantly increased pre-emptive and retro-active powers. Publication of convictions secured against criminals through the use of these powers by the regulator would be a further deterrent. As one illustration, on 6 December 2010 the US Department of Justice published a media release advising that two Nevada men had been sentenced in the federal court in Las Vegas for felony violations of the CAA. In this case, the men had pleaded guilty to manipulating the test results in hundreds of Nevada vehicle emissions inspections for illegal gain. As a warning to criminally minded persons, Nick Torres, Special Agent in Charge of the Office of Criminal Enforcement for the US EPA said:

> Breathing clean air is the right of every citizen, and individuals who jeopardise the health and well-being of a community for illegal gain will be vigorously prosecuted.[9]

3.3 Lesson 3 – confining trade in AEUs for GHG emission coverage

The synchronisation rule and enhanced carbon market integrity regime would confine trade in AEUs to economic agents (i.e. liable entities and non-liable entities alike) linked with the objectives of the ETS.

The markets would still be open to all, but the behaviour of non-liable entities trading AEUs would be conditioned by exposure to liability as Part 3A entities, and restitution under new Part 19A.

The discussion draft of the APA proposed to restrict participation in the US ETS to liable entities and regulated GHG participants, and *Commission Regulation (EU) No 1031/2010* of 12 November 2010 (the EU ETS auction regulation) signalled a shift toward limiting participation in the EU ETS to operators and authorised investment firms. However, unlike the synchronisation rule, the EU and US rules would not attach ETS obligations to these non-liable entities (notwithstanding regulating their participation in the relevant carbon market).

In a submission in relation to the Green Paper, Woodside Energy Limited urged the Australian Government to adopt an approach similar to a synchronisation rule. Woodside Energy Limited argued that the legislation should, at least in early auctions, aim at ‘restricting participation … to firms with acquittal obligations.’[10] Woodside Energy Limited noted that such a rule would ensure market liquidity and eliminate price risk.[11]

The synchronisation rule and enhanced carbon market integrity regime would not outlaw the buying, holding, selling or cancelling of AEUs, because such activity is essential to an ETS. However, they would directly address the types of concerns raised

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[9] United States Department of Justice, 'Las Vegas men sentenced for manipulating emissions testing machines' (Press Release, 6 December, 2010).
[10] Woodside Energy Limited, Submission No 485 to the Department of Climate Change, *Green Paper,* September 2008, 26.
[11] Chapter six discusses market liquidity and price discovery.

by Woodside Energy Limited, with the additional benefit of bringing more emitters under the CPRS.[12]

3.4 Lesson 4 – tackling indiscriminate substitution of compliance units

The CPRS Bill does not prevent intermediaries bringing together buyers and sellers, nor is arbitrage constrained. The legislative improvements proposed by this thesis reshape the scope for non-liable entities to game the design rules of the Australian ETS. Liability would become the condition upon which trading the emissions units would be fashioned. The synchronisation rule and enhanced carbon market integrity regime would not outlaw financial intermediaries the opportunity to arbitrage between different emissions reduction choices via substitution of IEUs for AEUs, or exploiting commensuration institutionalised in GWP. Instead, the trading activity of financial intermediaries in AEUs would be constrained in the same manner as liable entities.

3.5 Lesson 5 – addressing ramping behaviour

The EU ETS will prohibit the use of CERs and ERUs generated from projects involving destruction of HFC-23 and N_2O from adipic acid production from 1 January 2013.[13] Such proposed changes recognise that the success of an ETS relies on its environmental integrity, which gaming behaviour may comprise.

Since the multiplier effect is an unavoidable feature of GWP, the synchronisation rule proposed would discourage non-liable entities from seeking to profit under the CPRS from projects structured with a view to financial, and not environmental, benefit. By capturing non-liable entities in Part 3A and deeming them to be liable entities, the Australian scheme would be moving closer to the outright prohibition introduced into the EU ETS.

3.6 Lesson 6 – keeping sequestered carbon out of the atmosphere

This thesis does not assert that monetising GHG emissions reduction is undesirable. Indeed, the opportunity to so monetise is intended to assist emission reduction projects to become viable, thereby achieving positive environmental outcomes.

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[12] Improved scheme coverage would be achieved by making non-liable entities Part 3A liable entities.
[13] Connie Hedegaard, European Commissioner for Climate Action, ‘Statement on the Commission’s proposal for quality restrictions on the use of credits from industrial gas projects’ (Press Memo/10/614, European Commissioner for Climate Action, 25 November 2010).

However, the legislative improvements posited by this thesis would help ensure environmental benefits are more likely to be permanently captured. A synchronisation rule would bring within the ETS the purchaser of voluntary projects that have generated VERs or been credited AEUs, and therefore constrain the unwinding of those projects without regard to the emissions reduction objectives of the ETS.

4. CONCLUSION

This chapter introduced the synchronisation rule and the enhanced carbon market integrity regime, the legislative improvements to an ETS recommended by this thesis.

Lessons learned from the carbon markets and outlined in chapter four would be addressed by these recommended legislative improvements.

The proposed synchronisation rule is a pre-emptive rule. Regulating participation in the Australian ETS by limiting participation in the Australian carbon market to liable entities and regulated participants (as per the APA and the EU ETS auction regulations from 1 January 2013) would also be a pre-emptive rule. However, this thesis asserts abusive practices would be better dampened by conditioning ownership of AEUs and liability under the Australian ETS.

An enhanced carbon market integrity regime would create real-time and retro-active market intervention powers, thereby better empowering the regulator to more effectively determine genuineness of participants and oversee the carbon market.

The thesis recommendations would better arrest gaming as well as theft, fraud, manipulation and excessive speculation.

Chapter six turns to justify the proposed legislative amendments in the public interest.

CHAPTER 6

THE PUBLIC INTEREST AND FAIR AND ORDERLY CARBON MARKETS

In emissions trading schemes, the right tradeable in the market (the right to emit GHG unitised to 1t CO_2-e) is a property right created by Government.[1] Property rights regimes, such as emissions trading schemes (including the CPRS), are considered to be justified in the public interest.[2]

Design of emissions units in an ETS poses two fundamental questions: what is the nature of the right and to whom should it be allocated? Chapter one noted that the Australian Government, having vested power in ACCRA to issue the AEU, would contemporaneously define an AEU's attributes and life, as well as define the rules for transfer, banking and borrowing, cancellation, relinquishment and surrender. The Australian carbon market will be shaped according to the coverage of the CPRS Bill and these attributes of AEUs.

DCC stated that unfettered ownership of AEUs is the preferred design.[3] In this chapter, the response – the proposed synchronisation rule and enhanced carbon market integrity regime – are defended in the public interest.

This chapter critiques the policy reasoning for unfettered ownership as documented in

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[1] Richard B Stewart, 'Privprop, regprop, and beyond' (1990) 13 *Harvard Journal of Law & Public Policy* 91;Otto A Davis and Andrew B Whinston, 'On the Distinction between Public and Private Goods' (1967) 57 *The American Economic Review* 360, 362. Note that the US Acid Rain Program denies that rights to emit SO_2 are property rights: 42 USCS §7651b(f) provides:

> An allowance allocated under this title is a limited authorization to emit sulfur dioxide in accordance with the provisions of this title. Such allowance does not constitute a property right. Nothing in this title or in any other provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. … Allowances, once allocated to a person by the Administrator, may be received, held, and temporarily or permanently transferred in accordance with this title and the regulations of the Administrator without regard to whether or not a permit is in effect.

[2] Svetozar Pejovich, *Fundamentals of Economics: A Property Rights Approach* (The Fisher Institute, 1979). See also Boudewijn Bouckaert, 'What is Property?' (1990) 13 *Harvard Journal of Law & Public Policy* 775; Michael E Levine and Jennifer L Forrence, 'Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis' (1990) 6 *Journal of Law, Economics and Organization* 167; Richard A Posner, 'Theories of Economic Regulation' (1974) 5 *The Bell Journal of Economics and Management Science* 335; Arie Freiberg, *The Tools of Regulation* (Federation Press, 2010).

[3] See, eg, Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'Australia's low pollution future: economic reform to tackle climate change' (Speech delivered at the Australia Business Economists lunch, Sydney, 20 February 2009); Senator the Hon Penny Wong, former Minister for Climate Change, Energy Efficiency and Water, 'Cap and Trade in Australia: lessons on the path to a low carbon economy' (Speech delivered at the Pew Center, Washington, DC, 30 March 2009).

the Green and White Papers[4] and reflected in the language (and the absence of language) in the CPRS Bill (and the Corporations Act).[5]

Pejovich (1979)[6] and Freiberg (2010)[7], among others, reason that the public interest justifies laws enshrining or guaranteeing property rights. This is the very essence of Registry rules, the compliance regime and powers of a Regulator inside an ETS. Centralised intervention is justifiable because it assists the free and smooth exchange of production factors and goods (in the case of an ETS, the emissions units).

Legislation promoting the market-based allocation and assertion of individual property rights as well as the rules for transfer of those property rights promotes the public interest, for example, by facilitating, maintaining or protecting markets.

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[4] This thesis considers submissions made to the Australian Government in response to the Green Paper, in response to draft legislation released following the White Paper, in response to draft regulations released in November 2009 for the Carbon Pollution Reduction Scheme, and in response to the carbon price framework. Only the submissions in relation to the Green Paper and the draft regulations are publicly available. DCC received over 1 000 submissions in relation to the Green Paper:

- 31 submissions (approximately three per cent) touched upon property rights arising in an ETS: Professor Jon Altman, Centre for Aboriginal Economic Policy Research, ANU (*0233*); Australian Bankers Association (*1036*); Australian Financial Markets Association (AFMA) (*0550*); Australian Food and Grocery Council (*0831*); Australian Industry Greenhouse Network (*0424*) and (*0425*); Australian Petroleum Production & Exploration Association Ltd (*0834*); Australian Rail Track Corporation (*0572*); BP Australia (*0355*); Business Council of Australia (*0812*); Bureau of Steel Manufacturers (*0408*); Cement Industry Federation (*0926*); Centennial Coal (*0292*); Chamber of Commerce and Industry of Western Australia (*0500*); Chartered Institution of Building Services Engineers (CIBSE) (*0151*); ClimateEasy (*0197*); Commonwealth Bank (*0338*); Energy Supply Association of Australia, National Generators Forum, Energy Retailers Association of Australia, and the Australian Pipeline Industry Association (*0715*); Engineers Australia (*0322*); GM Holden (*0908*); Greenpeace (*0692*); International Emissions Trading Association (*0658*); Investor Group on Climate Change; Law Council of Australia (Environment and Planning Law group) (*0357*); Law Institute of Victoria (*0195*); Murrumbidgee Landcare Incorporated (*0166*); Professor Lee Godden, Associate Prof Jacqueline Peel and Ms Anne Kallies of the University of Melbourne (*0271*); Westpac Banking Corporation (*0695*); and Woodside Energy Ltd (*0485*).
- 11 of the submissions addressed the monitoring and regulation of the carbon market in any detail: Australian Bankers Association (*1036*); Australian Financial Markets Association (*0550*); Australian Food and Grocery Council (*0831*); Australian Petroleum Production & Exploration Association Ltd (*0834*); Business Council of Australia (*0812*); International Emissions Trading Association (*0658*); Law Council of Australia (Environment and Planning Law group) (*0357*); Law Institute of Victoria (*0195*); Professor Lee Godden, Associate Prof Jacqueline Peel and Ms Anne Kallies of the University of Melbourne (*0271*); Westpac Banking Corporation (*0695*); and Woodside Energy Ltd (*0485*).

[5] Notably, none of these aspects of the design of the CPRS were the subject of comment in any of the three Senate inquiries held in 2009 into the *Bill* for the *Carbon Pollution Reduction Scheme Act 2009* (Cth): Senate Economics Legislation Committee, '*Carbon Pollution Reduction Scheme Bill 2009 and related bills*' (Australian Senate, 2009); Senate Select Committee on Climate Policy, '*Report*' (Australian Senate, 2009); Senate Select Committee on Fuel and Energy, '*The CPRS: Economic cost without environmental benefit*' (Australian Senate, 2009).

[6] Pejovich, above n 2.

[7] Freiberg, above n 2. This is especially so when any necessary enforcement of (trading) contract compliance among citizens can be more efficiently organised collectively than individually

1. AN INTRODUCTION TO THE REGULATION OF FREE MARKETS

In market-orientated societies, the allocation of goods and services is primarily achieved through trading (exchange) that takes place in the market. 'The point of trading in a market is that the help that men can afford one another[8] is extended over a wide area and rendered more efficient by the device of free exchange'[9] and hence 'the market system as a form of organisation ... is supposed to advance economic welfare, more specifically allocative efficiency.'[10]

Modern economic theory began with the explanation of the market by Adam Smith (1776) and his reference to the 'invisible hand.' Smith stated:

> Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of society, which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer the employment which is most advantageous to the society. ...
> He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. ... he intends only his security ... he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.[11]

Liberal theory argues that free markets are the core and most efficient mechanism for society.[12]

However, free markets also require protection – a lesson reinforced by the GFC.[13]

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[8] Interestingly, Cicero once asserted that '*nature made us just that we might participate our goods with each other, and supply each others "wants"*': Marcus Tullius Cicero, *Treatise on the Laws* (first published 51BC, translated by Francis Barham and reproduced in *The Political Works of Marcus Tullius Cicero*, 1842, Dodo Press reprint ed, 2010) (emphasis in original).
[9] D Gordon and J Shearmur (eds), *H B Acton, The Morals of Markets and Related Essays* (Liberty Fund, 1993).
[10] Anthony I Ogus, *Regulation: Legal Form and Economic Theory* (Clarendon Press, 1994), 23.
[11] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Modern Library, first published 1776, introduction by Robert Reich, edited with notes by Edwin Cannan, Modern Library ed, 2000) 485.
[12] Gordon and Shearmur, above n 9; Herbert Lionel Adolphus Hart, *Essays in Jurisprudence and Philosophy* (first published 1978, revised ed, 1983); Friedrich A Hayek, *The Constitution of Liberty* (The University of Chicago Press, 1960). Economic efficiency is defined as the 'best possible allocation of scarce resources for individual and collective goods.' See Johan den Hertog, 'General Theories of Regulation' in Boudewijn Bouckaert and Gerrit de Geest (eds), *Encyclopedia of Law and Economics* (Edward Elgar, 2000) vol 5, 223, 225.
[13] Peter A Ubel, *Free Market Madness* (Harvard Business Press, 2009); Justin Fox, *The Myth of the Rational Market* (Harper Business, 2009); Mark A Martinez, *The Myth of the Free Market* (Kumarian Press, 2009). See also eg, Duane Chapman and Neha Khanna, 'Crying No Wolf: Why economists don't worry about climate change, and should' (2000) 47 *Climatic Change* 225.

State oversight of the market and regulation within it is fashioned (more or less, depending upon the prevailing vogue):

- to tweak the market economy to better achieve desired efficiency (also considered optimality);[14]
- to overcome 'market failure;'[15]
- to address the disadvantages of imperfect competition, unbalanced market operation or missing markets;[16]
- to redress undesirable market results;[17] or
- to stabilise market operation and assist the achievement of 'true' market equilibrium.[18]

Because the State has the power to coerce (a resource which, in principle, is not shared with citizens), to raise taxation, and to 'ordain the physical movements of resources and the economic decisions of households and firms,'[19] it is best placed to respond 'to the demand of the public for the correction of inefficient or inequitable market practises.'[20]

The public interest justifies Government legislation that authorises regulatory agency intervention in the ordinary business affairs of firms and/or prescribes their permitted conduct in order to improve and maintain fair competition and/or orderly competitive markets. For example, as noted in s 2.5B of chapter one, the *Competition and Consumer Act 2010* (Cth) (C&C Act) already outlaws a range of market behaviour (such as cartels,

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[14] Much depends upon whether the laissez-faire market is taken as an optimisation end point or an objective starting point. See, eg, Jeffrey M Herbener, 'Hoppe in One Lesson, Illustrated in Welfare Economics' in Jorg Guido Hulsmann and Stephan Kinsella (eds), *Property, Freedom and Society: Essays in Honor of Hans-Hermann Hoppe* (Ludwig von Mises Institute, 2009) – thus, properly analysed, market efficiency is a construct defined by the metrics of an economic analysis built within a theoretical modelling itself designed in the abstract. On this basis, David Antoff and Robert Hahn conclude, using history as a guide, that State intervention in the areas of energy and environmental policy is rarely efficient: David Antoff and Robert W Hahn, 'Government failure and market failure: On the inefficiency of environmental and energy policy' (Working Paper 004 Smith School of Enterprise and the Environment, University of Oxford, 2009).

[15] Professor Ross Garnaut states that 'climate change is a diabolical policy problem' linked to the 'greatest market failure ever seen:' Ross Garnaut, 'Final Report to the Commonwealth, State and Territory Governments of Australia' (Report, Garnaut Climate Change Review, 30 September 2008).

[16] Ogus, above n 10, 30. Market failure or imbalance can occur in many ways. It can be economy wide, in separate markets, as a result of destructive or excessive competition, or occur if market participants are in a 'prisoner's dilemma.'

[17] Ibid.

[18] See, eg, DCC, White Paper, above n 3; Wong, above n 3.

[19] George J Stigler, 'The Theory of Economic Regulation' (1971) 2 *The Bell Journal of Economics and Management Science* 3.

[20] Posner, above n 2.

arrangements and contracts that restrict dealings, price fixing, and business conduct that is monopolistic or misuses market power) in terms that reflect its pro-competition objects.[21] The Corporations Act also promotes the public interest by prescribing behaviour of corporations and their officers, and minimum expectations of disclosure and business conduct that implicitly is directed towards the maintenance of fair and orderly markets.[22]

Intuitively, ensuring that climate change and GHG emissions reduction objectives are achieved satisfies a public interest justification for Government intervention. Such justification includes design and oversight of carbon markets. Protecting citizens from market abuse by gaming, theft, fraud, manipulation and excessive speculation (and similar practices) also satisfies a public interest. To this public interest, the discussion now turns.

2. THE PUBLIC INTEREST IN REGULATING CARBON MARKETS

The CPRS Bill will be regulation (both economic and social). It is generally accepted in legal and economic literature that '*regulation* [is] taken to mean the employment of legal instruments for the implementation of social-economic policy objectives.'[23] Black (2002) suggests that:

> regulation is the sustained and focused attempt to alter the behaviour of others according to defined standards or purposes with the intention of producing a broadly defined outcome or outcomes, which may involve mechanisms of standard-setting, information-gathering and behaviour-modification.[24]

Ogus (1994) notes that 'what constitutes the "public interest" will vary according to time, place, and the specific values held by a particular society.'[25] Indeed, this is most clearly demonstrated in regulation introduced after the Great Depression, and again after the GFC, which deliberately wound back the unfettered freedom of markets (a freedom formerly advocated). In its essence, the public interest theory of regulation attributes to

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[21] *Competition and Consumer Act 2010 (Cth)* (C&C Act) s 2, defines the object of the Act: 'to enhance the welfare of Australians through the promotion of competition and fair trading.' See also Alan Fels, 'The Political Economy of Regulation' (1982) 5 *University of New South Wales Law Journal* 29, 55.
[22] *Corporations Act 2001* (Cth) (*Corporations Act*), pt 2D.1 of the Corporations Act for example, prescribes the duties and powers of directors, and pt 2M.3 prescribes financial reporting requirements.
[23] Johan den Hertog, 'General Theories of Regulation,' above n 12, 223 (emphasis in original)(interpolation added); Julia Black, 'Critical Reflections on Regulation' (2002) 27 *Australian Journal of Legal Philosophy* 1; Ogus, above n 10.
[24] Black, above n 23, 26.
[25] Ogus, above n 10, 29.

State legislators and others responsible for the design of regulation a desire to pursue collective goals.[26]

The public interest theory of regulation covers a broad spectrum of rationales for government intervention:

- the desire to achieve economic efficiency;
- the desire to eliminate harms arising from economic activities (externalities);
- the desire to maintain competitive markets; and
- the desire to frame systems for private property ownership and trading of rights among citizens.

The carbon market in Australia would be framed by the restrictive and non-restrictive provisions of the CPRS Bill and the Corporations Act (and Corporations Regulations) discussed in chapter one.

The analysis reveals an interesting tension.

On the one hand, the desire for the carbon market to drive the change in behaviour to reduce emissions of GHG, and on the other, a recognition that the market may allow for abusive or undesirable behaviour. For all emissions trading schemes, the resolution of this tension is bound to the public interest, viz, credibility of the ETS. Public confidence in the ETS and its protection of consumers, liable entities and Governments are truly reflected where there is a fair and orderly carbon market. The changes in the design rules for the EU ETS (more fully discussed in chapter seven) following approximately four months of closed carbon markets in EU member States is illustrative of this point: response to aberrant experiences have been designed to achieve the restoration of credibility.

Restrictive provisions, such as the anti-avoidance rule in ss 23 and 30 of the CPRS Bill and the amendments introduced into the Corporations Act by the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth), are directed to credibility. They can be classified as market maintenance rules. By vesting significant discretions in the relevant regulator, the law aims to eliminate the targeted behaviour through:

[26] Ibid 3; Freiberg, above n 2, 5. Of course, the collective goals are often determined by the politics of the day.

- the threat of or actual use of discretionary powers to deconstruct transactions and impose liability; and
- the imposition of penalties and other remedies for offences and failures to observe and discharge statutory liability.

The form of regulation that this thesis asserts is missing in the CPRS Bill – the use of rules that tie ownership of AEUs and liability under the CPRS Bill via a synchronisation rule or condition ownership within a market integrity regime – would also be legislative intervention directed to credibility. They would truly be for market maintenance and oversight, because their aim is for a fair and orderly carbon market.[27]

2.1. Open or restricted markets?

Calabresi and Melamed (1972) argue that there is an inherent public interest in the design and placement of property rights entitlements. Such rights have a fundamental effect on distribution of wealth within a society. States must make difficult second order decisions about the manner in which '"entitlements" … are protected by property, liability, or inalienability rules.'[28]

Save for free allocation of AEUs to EITE entities under Part 8 of the CPRS Bill,[29] the CPRS Bill makes no specific allocation of AEUs, which will be decided by the outcome

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[27] Another 'objective of market oversight is to ensure that price determination in a market is accomplished efficiently, fairly, and openly so as to reflect the forces of supply and demand' in the market: Interagency Working Group for the Study on Oversight of Carbon Markets, 'Report on the Oversight of Existing and Prospective Carbon Markets' (US Commodity Futures Trading Commission, 18 January 2011) 21.

[28] Guido Calabresi and A Douglas Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85 *Harvard Law Review* 1089, 1089. They argued (at 1090):

> Whenever a state is presented with the conflicting interests of two or more people, or two or more groups of people, it must decide which side to favour. Absent such a decision, access to goods, services, and life itself will be decided on the basis of 'might makes right' – whoever is stronger or shrewder will win. Hence the fundamental thing that law does is to decide which of the conflicting parties will be entitled to prevail. … the entitlement to pollute versus the entitlement to breathe clean air, … these are the first order of legal decisions.

Mishan (1960, 1967) proved that the argument for starting entitlement based upon efficiency is not symmetric: there are no reciprocal effects (equal culpability) where damage is inflicted only by one of the parties on the other: accordingly he argued in the case of air pollution that the law must be altered to 'provide comprehensive safeguards for the citizen's rights to certain fundamental amenities.' Ezra J Mishan, 'A Survey of Welfare Economics, 1939-59' (1960) 70 *The Economic Journal* 197; Ezra J Mishan, 'Pareto Optimality and the Law' (1967) 19 *Oxford Economic Papers* 255, 280.

[29] Chapter one noted that free allocation under pt 8 is a form of grandfathering, in that the allocation of the right to emit GHG partly aligns with a potential liability under the CPRS Bill. Even so, the free allocation proposed under pt 8 would not be tied to satisfaction of the actual liability of the EITE entity. An EITE entity would be at liberty to dispose of free AEUs allocated to it.

of the auction process (the primary market). Leaving the allocation decision to the auction process and framing regulations for EITE assistance are second order decisions.

The first order legal decision made by the Australian Government is reflected in the design of the CPRS Bill. The right embodied in the AEU, to emit 1t CO_2-e, implicitly prevails as a commodity, notwithstanding the climate objectives set out in s 3 of the CPRS Bill.[30] Until the ETS cap is operational (i.e. there are no longer fixed price (safety valve) AEUs and substitutability of IEUs is limited) and tightened, there will be no connection between any entity (liable entity or non-liable entity) owning the right to emit GHG and reduction by all liable entities of GHG emissions. Further, even when the ETS cap becomes operational, the AEU prevails as a commodity, because ownership of the emissions unit is not linked to any liability to reduce emissions (as noted in s 1.5 of chapter one).

It is not the purpose of this thesis to determine whether the entitlement to emit GHG ought to prevail as a commodity over the societal objective of reducing GHG emissions. Nonetheless, even accepting the first order legal decision reflected in CPRS design, it does not follow that ownership of AEUs should be permitted for non-liable entities without any connection to liability under the CPRS Bill. Achieving a level playing field in the carbon market (and hence a fair market) dictates that *liable and non-liable entities should face the same obligations under the CPRS Bill*. Following Calabresi and Melamed, addressing the lessons learned from operational emissions trading schemes would be in the public interest, if there would be an effect on wealth within society.

The Interagency Working Group for the Study on Oversight of Carbon Markets described the liquidity tension:

> The collective trading activity of investors – and specifically their willingness to take the opposite side of a derivative contract – can

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[30] Section 3(4) of the CPRS Bill provided:

> The third object of this Act is:
> (a) if Australia is a party to a comprehensive international agreement that is capable of stabilising atmospheric concentrations of greenhouse gases at around 450 parts per million of carbon dioxide equivalence or lower—to take action directed towards meeting Australia's target of reducing net greenhouse gas emissions to 25% below 2000 levels by 2020; and
> (b) if para (a) does not apply—to take action directed towards meeting Australia's targets of:
>   (i) reducing net greenhouse gas emissions to 60% below 2000 levels by 2050; and
>   (ii) reducing net greenhouse gas emissions to between 5% and 15% below 2000 levels by 2020; and
> (c) to take the action mentioned in para (a) or (b) in a flexible and cost-effective way.

> amount to a deep source of market liquidity for hedgers seeking to take market positions to mitigate their risk exposure. Despite the liquidity that investors provide, concerns are nevertheless sometimes raised that permitting this sort of investment activity in derivative markets may lead to asset prices becoming detached from fundamentals of supply and demand in the underlying commodity, or that certain investors may attempt to manipulate the market in order to influence price movements in the underlying commodity.[31]

This leads to two questions. How will the public interest be better served if:

- ownership would be unfettered and the markets open; or
- ownership would be conditioned and the markets restricted?

DCC explained unfettered ownership of AEUs in terms of market depth and liquidity[32] and competitiveness in the auction processes.[33] The competition for AEUs that may occur between the CPRS Bill Part 3 liable entities, as well as the competition for AEUs that may occur between those liable entities and non-liable entities (such as investors, financial intermediaries and speculators) in the primary, secondary and derivatives markets was anticipated by DCC in the Green Paper.[34] DCC foresaw the development of Australia's carbon market including 'the deepening of the primary market and the establishment of secondary markets.'[35]

The Green Paper reflected limited concerns about genuine participation and liquidity (expressed as efficiency) in the secondary carbon market in the following terms:

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[31] Interagency Working Group for the Study on Oversight of Carbon Markets, above n 27, 20.
[32] DCC, Green Paper, above n 3, ch 3.3.3, within the context of a discussion of market efficiency.
[33] Ibid ch 7.5.4.
[34] One year earlier, on 17 July 2007, the Australian Government under the leadership of the then Prime Minister of Australia, the Right Hon Dr John Howard AO, released a policy statement '*Australia's Climate Change Policy: our economy, our environment, our future.*' The policy statement followed upon and adopted the output of the Prime Ministerial *Task Group on Emissions Trading* (*TGET*) established 10 December 2006 to advise on the nature and design of a workable global emissions trading scheme in which Australia would be able to participate. TGET proposed a multi-faceted response to climate change and the reduction of GHG emissions, whilst maintaining the strength of the Australian economy, concluding 'it is appropriate for the Australian Government to set an explicit constraint on Australian emissions beyond 2012,' and that an Australian emissions trading scheme was necessary to achieve such a constraint at least cost. In its scheme design, TGET envisaged the right to emit GHG being allocated to polluters and conceptualised a role for well-developed financial markets and secondary instruments in these rights. The rationale for open primary, secondary and derivatives markets co-existing was reflective of TGET's assumption that market expectation of higher prices in the future would be the key lever by which to pull forward new technology: ibid 105. TGET assumed 'Tighter constraints on the quantity of emissions will induce higher permit prices. This, in turn, will help accelerate the development and diffusion of new technologies.'
[35] DCC, Green Paper, above n 3, 145.

> **3.3.3 Holding a carbon pollution permit**
> The Government will need to determine whether there should be restrictions on the categories of legal entities that are able to hold carbon pollution permits. For example, the right to hold permits could be restricted to liable entities and those in receipt of free permit allocations or to Australian legal entities.
> One option is that the right to own carbon pollution permits, or to participate in the first auction, could be restricted to liable entities and those in receipt of free permit allocations. This option has been proposed as a means of limiting demand, and hence the price of permits. However, such restrictions would limit the development of a deep and liquid market, which would provide a more accurate carbon price. It would also be difficult to enforce, as liable entities could purchase permits on behalf of others.
> The second option is to limit ownership of permits to Australian legal entities and persons. This would prevent foreign control of Australian permits and could limit manipulation by foreign entities of the carbon price in Australia's scheme. Any restrictions would need to be consistent with Australia's international trade obligations. On the other hand, restricting foreign ownership would not prevent market misconduct or manipulation, and ownership restrictions would be difficult to enforce. More importantly, this approach could reduce the liquidity and hence the efficiency of the carbon market.
> **3.2 Preferred position**
> A permit could be held and traded by any legal or natural person (subject to verification of identity and measures to prevent criminal activity).
> There would be no restriction on foreign ownership of permits, apart from any that might apply under a law other than the scheme legislation.[36]

A third option not considered by DCC would be to restrict market participation to entities with liability under the CPRS (Part 3 liable entities and Part 3A deemed liable entities) in order to limit manipulation of the carbon market by non-liable entities. Because the synchronisation rule proposed by this thesis imposes ownership restrictions as a measure to deter (inter alia) criminal activity, it neatly fits the exception to the preferred position (position 3.2) articulated above.

Conditioning ownership of AEUs should not automatically result in reduced liquidity. DCC estimated that the number of liable entities under the CPRS Bill would approximate 1 000 emitters.[37] By comparison, the minimum number of shareholders required by a public company in order for admission for quotation and trading of its securities on the Australian Stock Exchange is 500.[38] Further, DCC indicated that an

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[36] Ibid 150-151.
[37] DCC, White Paper, above n 3, xxviii.
[38] 'ASX Listing Rules' (Policy, ASX Limited, 17 December 2010) ch 1, condition 7.

Australian ETS would cover 75 per cent of Australia's GHG emissions.[39] Based on projected national average GHG emissions of approximately 582 000 000t CO_2-e (over the Kyoto first commitment period, 2008 to 2012),[40] it would therefore be expected that the annual auction in Australia of original issue AEUs from 1 July 2012 would be in the order of 435 000 000 AEUs (i.e. the number of AEUs issued would be capped at 75 per cent of Australia's targeted annual GHG emissions). In an Australian carbon market with this many liable entities and this annual stock of AEUs, the assertion by DCC in the Green Paper that ownership 'restrictions would limit the development of a deep and liquid market' is not convincing.

2.2. Auction participation

The primary market for AEUs will be in auctions of original issues of AEUs by ACCRA.

The Green Paper discussed the extent of participation in auctions in the following terms:

> An issue is whether participation at auctions should be universal or restricted to liable entities only.
> Universal participation would allow non-liable entities, including financial intermediaries, to participate in auctions. Feedback from some entities has indicated concern that the participation of non-liable entities in auctions may result in speculation ...[41]

As noted in s 1.8 of chapter one, DCC relied on Evans & Peck,[42] and Cramton and Kerr.[43] Recent analysis by Betz et al (2010)[44] also supports open participation. However, none of them directly answer the charge of speculation. For example, DCC stated that 'it will be difficult to limit participation and enforce a restricted auction scheme' because 'excluded entities could simply contract with liable entities to

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[39] DCC, White Paper, above n 3, xxviii.

[40] Department of Climate Change and Energy Efficiency Australian Government, 'Australia's emissions projections 2010' (Australian Government, Department of Climate Change and Energy Efficiency, 9 February 2011); Department of Climate Change and Energy Efficiency Australian Government, 'Quarterly Update of Australia's National Greenhouse Gas Inventory: June Quarter 2010' (Australian Government, Department of Climate Change and Energy Efficiency, 2010); Department of Climate Change and Water Australian Government, 'Tracking to Kyoto and 2020: Australia's Greenhouse Emissions Trends 1990 to 2008-12 and 2020' (Report, Australian Government, Department of Climate Change and Water, 2009).

[41] DCC, Green Paper, above n 3, pt 7.5.4 (auction participation) 269-270.

[42] Evans & Peck, 'Possible Design for a Greenhouse Gas Emissions Trading System' (Issues Paper, National Emissions Trading Taskforce, 2007).

[43] Peter Cramton and Suzi Kerr, 'Tradeable carbon permit auctions: How and why to auction not grandfather' (2002) 30 *Energy Policy* 333.

[44] Regina Betz et al, 'Auctioning greenhouse gas emissions permits in Australia' (2010) 54 *Australian Journal of Agriculture and Resource Economics* 219.

purchase permits on their behalf.'[45]

The amendments proposed by this thesis to s 147 of the CPRS Bill address the concern raised by DCC and would effectively discourage blind trust or nominee arrangements. In addition to proving identity, this thesis suggests[46] the applicant in a statutory declaration to ACCRA must:

- affirm that the opening of the Registry account is for the purposes of the CPRS Bill;
- disclose whether it is intended that the person shall be holding eligible emissions units in the Registry account for surrender, cancellation or for sale;
- declare that the person in whose name the account is to be opened (or for whose benefit eligible emissions units are to be held) is not or will not be engaged in any illegal activity, or market manipulation;
- agree that acquisition of Australian emissions units may result in a liability under the CPRS Bill (and consequently, the requirement to surrender AEUs); and
- acknowledge that failure to meet any liabilities under the CPRS Bill may attract civil and administrative penalties and suspension or forfeiture of the Registry account.

These hurdles are higher than proposals canvassed in draft EU Registry regulations released by the European Commission on 5 May 2011 (discussed in chapter seven).

A concern sometimes expressed is that:

> Smaller liable entities may need to use the services of specialist financial intermediaries to help them manage their emissions obligations over the year, as it would be too expensive and inefficient for them to directly participate in auctions.[47]

Technically, concerns with expense and efficiency in the auction process are not related to the size of liable entities, either in terms of their emissions, turnover or profitability. Such concerns relate to auction mechanism design and the level of fees to be charged by the Regulator. Indeed, a risk for liable entities that rely upon the services of specialist financial intermediaries would be that the price charged by those intermediaries for

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[45] Ibid.
[46] Recall chapter five of this thesis.
[47] DCC, Green Paper, above n 3, pt 7.5.4.

AEUs would include components for holding costs and profit for the financial intermediary providing the service, and hence such AEUs would be more expensive to acquire than if those entities directly participated in the auction process.

DCC also noted:

> A separate, but related, issue is whether any limits on participation should be based on financial standing. It is likely that some form of financial guarantee will be required to ensure that bidders will be able to pay for the permits they buy at auction, and to encourage only genuine participants.[48]

Subsection 90(3) of the CPRS Bill provides that an AEU would not be issued by ACCRA unless the fees or charges payable in respect the AEU are paid to the Commonwealth. Combining s 90(3) together with the requirement to prove financial standing in order to participate in an auction illustrates that persons with no money will not be welcome in the primary market. But contrary to the assertion by DCC, and as the experience with carousel fraud in the EU ETS has proved (lesson two in chapter four) being financial and being prepared to pay to acquire AEUs does not equate with 'genuineness' at all.

In response to two public submissions[49] to DCC challenging the Green Paper reasoning and raising again the question of tying ownership of AEUs and obligations under the CPRS, DCC replied in the White Paper:[50]

> The Green Paper's proposal that the lodgement of a security deposit would be the only limit on auction participation attracted a range of comments from stakeholders. Universal participation would allow non-liable entities, including financial intermediaries, to participate in auctions….
> Some stakeholders opposed this proposal, raising concerns that the participation of non-liable entities in auctions may result in speculation and the bidding up of prices. For example, Woodside Energy Limited argued that, to ensure market liquidity and eliminate price risk, the Government should:
>
> > limit participation, at least initially, in government permit auctions and restrict the ownership of permits to firms which are emitters or which have permit surrender obligations under the scheme. (Submission 485, p. 27)
>
> Similarly, the Australian Food and Grocery Council argued that:
>
> > Allowing financial markets to participate in the auctioning process invites the possibility of manipulation over the carbon trading

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[48] Ibid.

[49] Australian Food and Grocery Council, Submission No 0831, *Green Paper,* September 2008; and Woodside Energy Ltd, Submission No 0485 to Department of Climate Change, *Green Paper,* September 2008.

[50] DCC, White Paper, above n 3, ch 9.5.5.

> system, leaving the genuine purchaser of permits at a disadvantage. While there is a potential need for financial services in an established carbon market the Government should ensure that an appropriate level of control is maintained to prevent distortion. (Submission 831, p.14)

The response of DCC in the White Paper re-worded (using bullet points) the arguments posited by it in the Green Paper (outlined above).

With respect, the reasoning is confused.

Note that only liable entities participate during any fixed price safety valve transition period in an ETS. Subsection 89(2) of the CPRS Bill makes it clear that in an application to ACCRA by a person for AEUs for a fixed price:

> The number of Australian emissions units specified in the application must not exceed the number worked out using the following formula:
>
> Person's emissions number for the vintage year - Total number of eligible emissions units surrendered by the person in relation to the vintage year

The provisions of s 89 of the CPRS Bill would be replicated in the carbon price framework because the carbon price framework is proposed to start 1 July 2012 with 'a fixed price (through the issuance of fixed price units within an emissions trading scheme) before converting to a cap-and-trade emissions trading scheme.'[51]

Although liable entities and non-liable entities may emit GHG, only a liable entity could be a person with an emissions number. Non-liable entities (including financial intermediaries) cannot apply to acquire fixed price AEUs.

Ownership of fixed price AEUs is conditioned. Fixed price AEUs may not be traded, or banked or borrowed. Fixed price AEUs automatically surrender upon issue.[52]

Why then does the move from a fixed price determined by the Government to a price set by the market place also entail the opening of the ETS and lifting of conditions on ownership?

DCC stated in the White Paper that:

> Not allowing other players, including financial market participants, to buy permits at auction is likely to slow the development of …

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[51] Multi-Party Climate Change Committee, 'Carbon Price Mechanism' (Communiqué of the Multi-Party Climate Change Committee, 24 February 2011).
[52] CPRS Bill sub-s 89(5).

> hedging products, which would have the perverse outcome of making price risk less manageable.[53]

However, in the post-GFC policy and legal environment, rules that facilitate hedging have been the subject of review as discussed in chapter seven.

DCC has foreshadowed auction regulations which would limit the maximum parcel of AEUs that could be purchased by a participant in the auction to 25 per cent of the available amount at any one auction. However, as discussed in chapters four and five, in the absence of a grouping test and an aggregation rule, this proposed cap may be circumvented easily enough. Further, permitting a non-liable entity to acquire up to 25 per cent of the auction pool in every auction would be a significant starting point from which to attempt to corner the carbon market in Australia. As noted, the proposed limit on acquisition of AEUs in auctions (the primary market) would not apply in the secondary and derivatives markets.

Twelve days before the release of the Green Paper, Professor Ross Garnaut released a Draft Report of his Garnaut Review.[54] Chapter 15 of the Draft Report, drawing upon an earlier Garnaut Review discussion paper,[55] outlined a design for an Australian ETS. However, the draft Garnaut Review did not address itself to the issues of ownership of rights to pollute (however it did comment that it expected market-supporting financial services to emerge). The Final Report of the Garnaut Review (issued after the Green Paper, but before the White Paper) also did not address the issues of ownership of the right to pollute.[56] The Review 2011 Update papers did not address the issue either.

To date, the concepts of a synchronisation rule and an enhanced carbon market integrity regime have not been sufficiently addressed in the public policy debate in Australia. Ignorant of the experiences of operational emissions trading schemes and the impending GFC, DCC's observation that 'permits, like other financial products, could also be the subject of market misconduct, including market manipulation and insider trading'[57] would prompt greater consideration post-GFC.

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[53] DCC, White Paper, above n 3, ch 9.5.5.
[54] Ross Garnaut, 'Draft Report to the Commmonwealth, State and Territory Governments of Australia' (Report, Garnaut Climate Change Review, 4 July 2008).
[55] Ross Garnaut, 'Emissions Trading Scheme Discussion Paper' (Discussion Paper 6, Garnaut Climate Change Review, March 2008).
[56] Garnaut, Garnaut Review, Final Report, above n 15. Professor Garnaut has been requested by the Climate Change Committee to update the Garnaut Review (*Review Update 2011*, to be completed by 31 May 2011).
[57] DCC, Green Paper, above n 3, 151; DCC, White Paper, above n 3, 8-23, 9-21.

2.3. Market misconduct, price manipulation and insider trading

DCC policy rejected market integrity rules being in-built within the CPRS Bill. Instead, the Australian Securities and Investments Commission (ASIC) would be given charge of oversight of the Australian carbon market. In s 8.5.1 of the White Paper, DCC stated:

> The Australian Securities and Investments Commission (ASIC) will be given the necessary legal power to investigate and prosecute market manipulation in the carbon market. To that end, the preferred position expressed in the Green Paper was that permits be financial products for the purposes of the Corporations Act 2001, but some adjustment to that regime may be required to fit the characteristics of carbon pollution permits.[58]

This thesis reveals the problematic application of the Corporations Act, Corporations Regulations (and proposed regulations) and the new ASIC market integrity rules (discussed in chapters one and seven). The potential for the occurrence of the types of behaviour discussed in this thesis, which have been experienced in operational emissions trading schemes, was also recognised by DCC. DCC expected:

> market misconduct, including market manipulation and insider trading. Market manipulation includes manipulation of the auction process (for example, through collusion) and of prices in the secondary market. There is also the possibility of cornering the market for permits close to the time for surrender.[59]

As noted above, DCC questioned whether ownership restrictions would deter market misconduct and manipulation in auctions. However, in the White Paper, DCC also outlined the need for regulatory supervision of the ETS, and the choices available to provide such oversight:

> To ensure the ongoing credibility of the Scheme, the Government must consider the regulation of services and other conduct relating to permits. Two options for achieving this were discussed in the Green Paper:
> - creating a new regulatory regime;
> - using the existing regulatory infrastructure provided in Chapter 7 of the Corporations Act, which addresses, among other things, the regulation of formal financial markets, market misconduct and financial advice.
>
> A new regulatory regime could be more easily tailored to the distinctive features of the Scheme and permits, while adapting the existing regulatory system would be more likely to achieve consistency with the regulation of similar financial services and avoid unfair competition.
>
> In addition to any specific role for ASIC, the Australian Competition and Consumer Commission would exercise its economy-wide oversight

[58] DCC, White Paper, above n 3, 8-23.
[59] Ibid.

> of anti-competitive conduct.[60]

DCC summarised the options for carbon market oversight as follows:

> The options (including those that arise from the submissions received) are:
>
> - Option 1 — make permits financial products for the purposes of the Corporations Act (with adjustments to fit the nature of the product and ensure no unnecessary compliance costs);
> - Option 2 — design a market integrity and investor protection regime specifically for permits;
> - Option 3 — treat permits as commodities, rather than as financial instruments, with the economy-wide provisions in the Trade Practices Act 1974 applying, but not the provisions in the Corporations Act that specifically address financial services and markets.[61]

DCC noted that Option two would create a regulatory regime tailored to the distinctive features of the CPRS and AEUs. However, DCC considered it would need to be designed from scratch and would require additional legislation and resources to implement and enforce. Thus, compared with adapting the existing regulatory system, DCC concluded Option two would:

- be less likely to achieve consistency with the regulation of similar financial services;
- avoid unfair competition;
- fail to capitalise on the existing expertise of ASIC;
- create differences in regulation; and
- involve increased administrative costs for both the Government and market participants.

The synchronisation rule and enhanced carbon market integrity regime supported by new Registry account opening procedures, new Part 3A liable entities and also a new Part 19A in the CPRS Bill is a hybrid of Options one and two.

With respect, the legislative machinery proposed by this thesis (see Box 5.1, Box 5.2 and Box 5.3 in chapter five) has been designed and drafted so that they would:

- fit into the CPRS Bill (as a proxy for the design of a carbon pricing mechanism);
- achieve consistency with the regulation of similar financial services;

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[60] Ibid.

[61] Ibid. Note that the *Trade Practices Act 1974* (Cth) has been renamed the *Competition and Consumer Act 2010* (Cth).

- avoid unfair competition (by levelling the playing field);
- capitalise on the existing expertise of the regulator chosen to oversee the carbon market;
- eliminate differences in regulation; and
- involve the same level of administrative costs for all market participants.

Additionally, the role created for a carbon market advisory committee would provide the Australian Government and all market participants with assurance that an appropriately constituted and expert body would monitor and promote the objective of a fair and orderly carbon market.

Collectively, the mechanisms proposed by this thesis represent regulatory integration – carbon market integrity emanating from within the provisions of the CPRS Bill and consequential amendments made to other legislation is harmonised with the existing and emerging regulatory framework in Australia and overseas.

2.4. Price discovery

Markets (and especially futures markets) play a role in price discovery.[62]

Policy positions in Australia have consistently noted the importance of the role of price discovery in shaping ETS design. These policies argue that unfettered ownership is necessary for primary, secondary and futures markets to develop, and that these markets are necessary for proper price discovery. For example, in the White Paper DCC stated:

> Policies aimed at curbing undesirable behaviour should not unduly

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[62] TGET, above n 34. TGET stated that for market participants, the primary purposes of derivatives markets are:

> to transfer the risk of adverse changes in prices from those who wish to reduce risk to those willing to accept it; the revelation of price information that reflects the consensus of real bids, offers and trades; bids, offers and trades in futures and option markets are publicly disseminated – as a result, they often become the primary source of price discovery.

TGET implicitly supported the absence of constraints on primary and secondary markets, suggesting that their open performance would be essential tools in the discovery of spot and forward prices for carbon and providing additional flexibility to entities:

> Aside from the actual permits that can be traded, related products will emerge in the market. Warrants, futures and options contracts will develop rapidly after the Government provides clear signals of its intent to establish an emissions trading scheme. ... These related products (and other more exotic formulations) will form the basis of the derivative markets that will support the emissions trading scheme.

See also Charles R Geisst, *Wheels of Fortune: The History of Speculation from Scandel to Respectability* (John Wiley & Sons, 2002); Bart Chilton, 'New Species: How Market Participants have Evolved in Financial Ecosystems' (Speech delivered at the American Public Gas Association, Winter Conference, Fort Myers, 1 February 2011).

> disrupt the development of a deep and liquid market. By offering liable entities a wide range of sellers and sources of permits at competitive prices, such a market will be a defence against that type of behaviour.[63]

In the Green Paper DCC discussed the bidding up of prices in auctions, in the context of auction participation. DCC noted 'feedback from some entities has indicated concern that the participation of non-liable entities in auctions may result in … the bidding up of prices.'[64]

It is outside the scope of this thesis to analyse price discovery theory.[65] Notwithstanding, price discovery is not related to the *character* of the market participants.[66] It may be related to numbers of participants but it is usually related to the mechanics for information dissemination (transparency) – and in this regard, the synchronisation rule and enhanced carbon market integrity regime do not diminish, rather they enhance, the availability of information to the carbon market.

In the White Paper, DCC specifically noted that:

> The issue of permit restrictions (such as limits on banking and borrowing of permits) was not recognised as a significant impediment to the operation of strong forward markets.[67]

Thus, the claim for forward emissions price discovery may still be sufficiently realised even if the holding of AEUs is conditioned by liability obligations under the CPRS Bill, and the presence of an enhanced carbon market integrity regime.

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[63] DCC, White Paper, above n 3, 8-23. Similar arguments were advanced by TGET, the *National Emissions Trading Forum* (*NETF*), the Garnaut Review, and DCC in the Green Paper.
[64] DCC, Green Paper, above n 3, 269-270.
[65] John Board, Charles Sutcliffe and Stephen Wells, *Transparency and Fragmentation: Financial Market Regulation in a Dynamic Environment* (Palgrave Macmillan, 2002) 68; Essvale Corporation Limited, *Business Knowledge for IT in Trading and Exchanges: A Complete Handbook for IT Professionals* (Essvale Corporation Limited, 2008) ch 1.
[66] Market depth is related to concentration, i.e. the numbers who participate in a market, and their relative market shares.
[67] DCC, White Paper, above n 3, 8-23. John Cassidy (2009) also identifies three illusions in ('utopian') economics that are equally applicable to demands on account of price discovery for unfettered ownership of rights to emit GHG in emissions trading schemes:

- the illusion of harmony – the claim that free markets always generate good outcomes;
- the illusion of stability – the idea that a free market economy is sturdy; and
- the illusion of predictability – the premise that movements in markets follow regular patterns that could be foreseen.

John Cassidy, *How Markets Fail: The logic of economic calamities* (Farrar, Straus and Giroux, 2009), 8, 13.

The post-GFC reforms of carbon markets in the EU and US supports moves to restrict participation in carbon markets, condition ownership and improve carbon market integrity. Price discovery is not raised as an objection in any of these reforms.

3. CONCLUSION

This chapter outlines how the proposed synchronisation rule and enhanced carbon market integrity regime are in the public interest.

The restrictions imposed on dealings with AEUs through the design of the CPRS Bill and the Corporations Act (and Corporations Regulations) suggest that the Australian Government expects that it will be the threat of regulator intervention, the presence of extensive investigation and information gathering powers of ACCRA, and short-fall penalties coupled with make-good for unit shortfalls by liable entities that will motivate behaviour in the carbon market. The proposals for legislative reform urged by this thesis fit within this market maintenance regulatory framework.

AEUs should be the currency for GHG emissions coverage by liable entities, rather than the currency for gamers and speculators. The changes proposed by this thesis to opening of a Registry account, the increased disclosure and declaration of purposes that improve the ability of ACCRA to enforce compliance, the requirement to obtain a GHG emissions permit, and the extension of liability to the new Part 3A deemed liable entity, together with the enhanced carbon market integrity regime of a new Part 19A, would all combine to help level the playing field in carbon markets in the public interest.

By attempting to arrest speculation (divorced from climate change objectives) in AEUs, the thesis proposals strengthen the effectiveness of the Australian ETS. Chapter seven now turns to a comparative review of EU and US policy and law on similar market issues.

CHAPTER 7

THE GFC, COMMODITY MARKETS AND POST-GFC CARBON MARKET OVERSIGHT

> *Market efficiency and effective price discovery are hindered when markets are not protected from fraud and manipulation … Regulatory oversight should, therefore, guard against these concerns in order to ensure that carbon markets will allow market participants to trade and transfer allowances and carbon offsets, and to hedge price risk, in a fair and efficient manner to help achieve carbon emission reductions cost-effectively*[1]

The causes and phenomenon of the GFC are not the concern of this thesis, but the increase in market intervention and supervision by regulators in the wake of the GFC, and the translation of that reaction into carbon market oversight is at the heart of the legislative recommendations posited by this thesis, and the subject-matter of this chapter.

This chapter aims to define the rationale and emerging laws for carbon market integrity regimes, and to argue that this is a model that an Australian ETS should replicate.

1. THE GFC AND ITS IMPACT ON MARKET REGULATION

Merrouche and Nier (2010) of the *International Monetary Fund* (*IMF*) noted that 'three years after the onset of the crisis … most commentators concede that supervision and regulation were lacking.'[2]

1.1 The 'Great Crash' of 2008

At the epicentre of the many reasons posited for the GFC[3] lies the commodification of mortgages in the US.[4] Bundling and packaging of sub-prime mortgages in

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[1] Interagency Working Group for the Study on Oversight of Carbon Markets, 'Report on the Oversight of Existing and Prospective Carbon Markets' (Report, US Commodity Futures Trading Commission, 18 January 2011) 49.

[2] Ouarda Merrouche and Erlend Nier, 'What Caused the Global Financial Crisis? - Evidence on the Drivers of Financial Imbalances 1999-2007' (IMF Working Paper WP/10/265, International Monetary Fund, December 2010) 4. Merrouche and Nier argue:

> Supervision and regulation of the financial system is a key means to prevent crises, by controlling moral hazard and discouraging excessive risk-taking on the part of financial institutions. Inadequate supervision and rare therefore prime candidates to have caused the global financial crisis.

[3] See, eg, Financial Crisis Inquiry Commission, 'The Financial Crisis Inquiry Report' (Report, United States of America, Financial Crisis Inquiry Commission, 2011); Viral V Acharya et al, *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance* (Wiley, 2011); Viral V Acharya and Matthew Richardson, *Restoring Financial Stability: How to Repair a Failed System* (Wiley, 2009); Willem H Buiter, 'Lessons from the 2007 Financial Crisis' (2007) *SSRN eLibrary* <http://ssrn.com/paper=1140525>; Frank Ackerman, 'Carbon Markets are Not Enough' (United Nations Conference on Trade and Development, 2009/2010); Yvan Allaire and Mihaela E Firsirotu, *The Fall of*

securitisations and derivatives dealings, and the creation of synthetic products[5] became a business activity much bigger than the primary activity of originating mortgages.[6] In time (and through financial institutions that are globally systemic (G-SIFIs))[7] the activity developed into a risk to the whole financial system and global markets. The risks to primary markets and the consequences of the speculation[8] that occurred replayed a narrative familiar to the history of commodities and futures exchanges.[9]

Activities of market makers, investors, financial intermediaries (including G-SIFIs) and speculators were obscured.[10]

Wall Street: How the Crisis Was Made and How it Could Have Been Avoided (Fl Press, 2009); John Authers, *The Fearful Rise of Markets: Global bubbles, synchronized meltdowns, and how to prevent them in the future* (FT Press, 2010); Jeffrey Friedman (ed), *What Caused the Financial Crisis* (Penn, 2011); Ross Garnaut and David Llewellyn-Smith, *The Great Crash of 2008* (Melbourne University Press, 2009); Gary B Gorton, *Slapped by the Invisible Hand: The Panic of 2007* (Oxford University Press, 2010); Gregory A Krohn and William R Gruver, 'The Complexities of the Financial Turmoil of 2007 and 2008' (2008) *SSRN eLibrary* <http://ssrn.com/paper=1282250>; Eamonn K Moran, 'Wall Street meets Main Street: Understanding the financial crisis' (2009) 13 *North Carolina Banking Institute* 5; Steven L Schwarcz, 'Systemic Risk' (2008) 97 *Georgetown Law Journal* 193; Alan Schwartz, 'How Much Irrationality Does the Market Permit?' (2008) 37 *The Journal of Legal Studies* 131; George Soros, *The New Paradigm for Financial Markets: the Credit Crisis of 2008 and What it Means* (Scribe Publications, 2008); Paul Krugman, *The Return of Depression Economics and the Crisis of 2008* (Penguin Books, 2008); John Cassidy, *How Markets Fail: The logic of economic calamities* (Farrar, Straus and Giroux, 2009); Justin Fox, *The Myth of the Rational Market* (Harper Business, 2009); Andrew Ross Sorkin, *Too Big to Fail* (Viking, 2009); and the references cited by each of the foregoing.

[4] Mike Callaghan, 'Where are we in terms of heightened regulation and why are we here?' (Paper presented at the Regional Symposium: Enhancing International and Regulatory Cooperation – Post Global Financial Crisis, Melbourne, 8/9 March 2011).

[5] For a technical explanation of these products, see Laurie S Goodman and Frank J Fabozzi, *Collateraized Debt Obligations: structures and analysis* (John Wiley & Sons, 2002). Such products are recognisable as a 'structured product' as defined R1.4.3 in the *ASIC Market Integrity Rules (ASX Market) 2010* (Cth), F2010L02211 (as amended) (*ASX Market Integrity Rules*).

[6] Financial Crisis Inquiry Commission, above n 3.

[7] See chapter four of this thesis.

[8] Lynn A Stout, 'Risk, Speculation, and OTC Derivatives: An Inaugural Essay for Convivium' (2011) 1 *Accounting, Economics, and Law: A Convivium* Article 2, 6.

[9] For other historical accounts, see Charles R Geisst, *Wheels of Fortune: The History of Speculation from Scandel to Respectability* (John Wiley & Sons, 2002); Stephen Craig Pirrong, *The Economics, Law, and Public Policy of Market Power Manipulation* (Kluwer Academic Publishers, 1996); and the references above, n 3.

[10] Frank D'Souza, Nan S Ellis and Lisa M Fairchild, 'Illuminating the need for Regulation in Dark Markets: Proposed Regulation of the OTC Derivatives Market' (2010) 12 *University of Pennsylvania Journal of Business and Employment Law* 473. The turmoil in the international derivatives market indeed highlights the extent of the lack of regulation and the deregulation that was the norm before the GFC. The derivatives markets were self-regulated by the *International Swaps and Derivatives Association* (*ISDA*) – a body that encouraged market growth rather than market oversight: Aaron Unterman, 'Innotative Destruction – Structured Finance and Credit Market Reform in the Bubble Era' (2009) 5 *Hastings Business Law Journal* 53. The House of Lords European Union Committee concluded in its investigation into the GFC:

> As we took only limited evidence on the role of derivatives in the financial crisis, we do not come to a conclusion as to whether derivatives were a causative factor in this crisis,

Activities, permitted by commodification and carried on without regard to the underlying purpose of a home mortgage for a borrower, constituted an abuse to be remedied.[11]

In Australia, the Deputy Prime Minister and Treasurer, the Hon Wayne Swan MP, summed up the experience:

> The breathtaking extent of the GFC suggests that the lessons learned after previous crises, and in particular the (comparatively less devastating) 1997 Asian Financial Crisis (AFC), were not learned.[12]

After the GFC it was recognised that 'a profound review of regulatory policy'[13] was needed.

The response by governments and regulators to the GFC has been pursued in many forums, including:

- the Leaders of the Group of Eight (G8);[14]
- the Leaders of the Group of Twenty (G20);[15]

> but it is clear that the systemic risks of derivatives were not, nor could they have been, fully identified, because of the opacity of the market.

House of Lords European Union Committee, 'The future of regulation of derivatives markets: is the EU on the right track?' (10th Report of Session 2009-10: Report with Evidence, House of Lords, United Kingdom Parliament, 2010) 21.

[11] In the words of the US Senate:

> Years without accountability for Wall Street and big banks brought us the worst financial crisis since the Great Depression … the failures that led to this crisis require bold action. We must restore responsibility and accountability in our financial system … and establish[…] rigorous standards and supervision to protect the economy and … consumers …

United States Senate, *Brief Summary of the Dodd-Frank Wall Street Reform and Consumer Protection Act* (2010) <http://dpc.senate.gov/pdf/wall_street_reform_summary.pdf>.

[12] Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Adapting our architecture to challenging times' (Speech delivered at the Brookings Institute, Washington DC, 10 October 2008).

[13] The de Larosière Group, 'Report of the High Level Group on Financial Supervision in the EU' (2009), 15.

[14] The Group of Eight (G8) refers to a group of eight developed States - Canada, France, Germany, Italy, Japan, Russia, United Kingdom and United States - which convene an annual meeting to address global issues such as economic growth, crisis management (including the GFC), energy, the environment and climate change. France chaired the most recent G8 Summit, the Deauville Summit, in late January 2011. The extent to which the G8 was able to influence the global economic and climate agenda was limited by the exclusion of major emerging States, including Brazil, China, Mexico and South Africa. In the wake of the GFC, the September 2009 G8 Pittsburgh Summit re-established the Group of Twenty (the G20) to address the extent of the systemic financial crisis and to acknowledge the growing role of the emerging countries.

[15] The G20 was first established in 1999, in the wake of the 1997 Asian Financial Crisis (*AFC*) to bring together major advanced and emerging economies to stabilise the global financial system. Australia's then Prime Minister, the Hon Kevin Rudd MP played a pivotal role in 2009 in re-establishing the G20 to address the economic and financial issues that required (and continue to require) a global response after the GFC.

- the Financial Stability Board (FSB);
- the International Organization of Securities Commissions (IOSCO);
- the Global Forum on Transparency and Exchange of Information;
- the World Bank; and
- the IMF.

There have been inquiries and legislative reform in Asia,[16] Australia, Europe and the US.

International rules and standards in place before the GFC (for example, the Basel Accords, see Box 7.1) have been re-evaluated.

1.2 Post-crises regulation

The legislative response in G20 countries included creating and rearranging regulatory and supervisory oversight of markets, banning certain trading (i.e. naked short sales), and changing the method, place (i.e. exchange) and transparency of certain financial products in derivatives markets and OTC transactions.[17]

The G20 agreed to 'implement reforms that will strengthen financial markets and regulatory regimes so as to avoid future crises.'[18] They recognised that:

> financial markets are global in scope, therefore, intensified international cooperation among regulators and strengthening of international standards … and their consistent implementation is necessary to protect against adverse cross-border … developments affecting international financial stability.[19]

Specifically, the G20 committed their legislatures and their regulators to ensure that their actions avoided regulatory arbitrage and supported market discipline and as appropriate, 'more intensive regulatory oversight.'[20]

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[16] Regionally, the APEC Leaders' Agenda to Implement Structural Reform (*LAISR*) is an important forum. Australia hosted the APEC Ministerial Meeting on Structural Reform on 3-5 August 2008, in Melbourne, at which APEC Ministers endorsed the APEC 'Good Practice Guide on Regulatory Reform.'
[17] Acharya and Richardson (2009) argue for a single regulatory agency which would be responsible for oversight of all securities, questioning 'why the regulatory treatment of derivatives should be different from other securities.' Acharya and Richardson, above n 3, 248.
[18] G20, 'Declaration: Summit on Financial Markets and the World Economy' (Leaders of the Group of Twenty, Washington, 15 November 2008) 2; Recommendation 6 of The de Larosiere Group, above n 13, 23.
[19] G20, above n 18, 2.
[20] Ibid 7.

Box 7.1: The Basel Accords: Re-regulating the banking sector

THE BASEL ACCORDS: RE-REGULATING THE BANKING SECTOR
Notably, the GFC was not just a financial crisis it was also a banking crisis.[21] Arguably the most widely implemented international banking regulations are the Basel Accords.[22] The Basel Accords are international banking regulations advanced by the *Basel Committee on Bank Supervision* (*BCBS*), which operates through the *Bank for International Settlements* (*BIS*). The BIS, the oldest international financial organisation, was established in 1930 to foster cooperation between central banks after the 1929 Great Depression.[23] After the 1997 AFC, Basel I (1998) created a bank asset classification system. This required banks to maintain capital equal to at least eight per cent of risk-weighted assets (e.g. maintain at least $8 million in capital for every $100 million in risk-weighted assets). Basel II (2006) attempted to integrate Basel capital standards with national regulations by setting the minimum capital requirements for financial institutions. The purpose of Basel II was to create standards to regulate how much capital financial institutions must keep on hand.[24] Basel II entered into force in Europe on 1 January 2008 and was to be applicable in the US from 1 April 2010 – too late to moderate the behaviour that contributed to the GFC. Despite the regulation of Basel I and Basel II, the banking sector was systemically exposed to the GFC. A reappraisal of Basel I and Basel II resulted in the introduction of Basel III in 2009. Basel III (2009) reforms target both bank-level regulation (to increase the resilience of individual banking institutions) and system wide risks (to address the internal and cyclical risks faced by the banking sector). Banks were given three years to satisfy all requirements, which include maintaining proper leverage ratios and introducing new capital requirements. Banks must now hold more capital against their assets, thereby decreasing the size of their balance sheets and therefore their ability to leverage themselves. In a speech in April 2011, Stephen Walter, the Secretary General of the Basel Committee on Banking Supervision, noted that '*benefits of tighter regulation through Basel III exceed the costs.*'[25]

The GFC was not the first time an economic crisis has led to the re-evaluation of market regulation and oversight!

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[21] Moran, above n 3.
[22] Unterman, above n 10, 104.
[23] Bank for International Settlements, *The Basel Committee's Response to the Financial Crisis: Report to the G20* (October 2010) <http://www.bis.org/publ/bcbs179.pdf>.
[24] Bank for International Settlements, *Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework – Comprehensive Version* (June 2006) <http://www.bis.org/publ/bcbs128.htm>.
[25] Stephen Walter, Secretary General, Basel Committee on Banking Supervision, 'Basel III: Stronger banks and a more resilient financial system' (Speech delivered at the Financial Stability Institute conference on Basel III, Switzerland, 6 April 2011) (emphasis added).

Many academics and regulators, including Andrew G Haldane, Executive Director, Financial Stability of the Bank of England, draw important parallels between the current increase in regulatory oversight and the increase in regulatory oversight in the 1930s after the 1929 Great Depression.[26]

Extensive legislation and regulation was introduced in reaction to the Great Depression in order to prevent another such crisis. Over time, this legislation was wound back.

Although an examination of the regulation that was introduced in the 1930s in direct response to the Great Depression is beyond the scope of this thesis, it is useful to acknowledge the main legislative reforms that were undertaken as a direct response to the Great Depression, and important to note those that were rolled back in the years before the GFC.

Box 7.2 illustrates the regulatory reforms which occurred after the Great Depression.

Whilst analysing such reforms is outside the scope of this thesis, the history points to similar behavioural lessons from the Great Depression and the GFC that the legislative recommendations of this thesis aim to address.

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[26] Andrew G Haldane, 'The $100 billion Question' (Paper presented at the Institute of Regulation & Risk, Hong Kong, 30 March 2010).

Box 7.2: Regulation after the Great Depression of 1929

REGULATION AFTER THE GREAT DEPRESSION OF 1929

The GFC represented a global and potentially catastrophic financial and economic crisis. As one measure of the crisis caused by the GFC, Wall Street in 2008 endured its worst year since 1931.[27]

The extent of the 'great crash'[28] was, however, not entirely unprecedented. What began as a 'financial crisis in the United States' turned into 'a global recession, the likes of which had not been seen since the Great Depression.'[29]

After the Great Depression, a raft of reforms targeting the banking and financial sectors in the US were introduced. These reforms included:

- *Glass-Steagall Act of 1933*[30] – introduced a myriad of banking reforms, including the separation of commercial and investment banking, which was thought to have contributed to the Great Depression.[31]
- *Securities Exchange Act of 1934* – created the *Securities and Exchange Commission* (*SEC*). The purpose of the SEC was to monitor the primary and secondary equities markets.[32]
- *Commodity Exchange Act of 1936* – designed to apply to all futures exchanges and intended to curb the speculation that had characterised the market in the lead-up to 1929 and its aftermath. It established the Commodities Exchange Commission, which required all brokers to be registered, could limit the amount of trading on any one day on any exchange, required brokers to segregate customer's margin funds from brokerage house funds, and banned options being traded on agricultural commodity futures. The Commodities Exchange Commission was considered to be relatively ineffective, and was eventually superseded by the Commodity Futures Trading Commission (CFTC) in 1974.[33]

At the conclusion of World War II, the banking sector (in the United States and abroad) remained heavily regulated. As George Soros (2008) noted: 'managements had been traumatised by the failures of the 1930s, and safety was the paramount consideration, overshadowing profit or growth.'[34] Paul Krugman (2008) stated 'this new system protected the economy from financial crises for almost seventy years.'[35]

However, the reforms implemented after the Great Depression were eventually wound back. Three of the main drivers for this deregulation were the ongoing globalisation of the financial system, the removal of regulations to accommodate innovative new financial

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[27] Moran, above n 3.
[28] Garnaut and Llewellyn-Smith, above n 3; Soros, above n 3.
[29] Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'A year since Lehman: Where to from here?' (Speech delivered at Chatham House, London, 4 September 2009).
[30] It should be noted that there was also a *Glass-Steagall Act of 1932*, which provided gold for business and industry in an attempt to prevent hoarding.
[31] Garnaut and Llewellyn-Smith, above n 3, 45.
[32] Giesst, above n 9, 127.
[33] Ibid 126-127.
[34] Soros, above n 3, 111.
[35] Krugman, above n 3, 157.

REGULATION AFTER THE GREAT DEPRESSION OF 1929
products, and perhaps most significantly, the passage of time in which a new generation forgot the reasons why, after a crisis, increased regulation occurred.[36] Deregulation occurred under most administrations. For example, in the US in 1999 the Glass-Steagall Act and the Commodity Exchange Act were superseded by the *Financial Services Modernisation Act* and the *Commodity Futures Modernisation Act* respectively.[37] Australia also saw extensive deregulation, for example in 1983 the separation of banks from other financial institutions ended, and foreign banks and building societies were allowed to enter the market.[38]

In Australia, response to the GFC included a June 2009 report by the *Corporations and Markets Advisory Committee* (*CAMAC*) on ‘Aspects of Market Integrity’ and consideration by the Treasury of a framework for disclosure of equity derivative products[39] and a competitive and sustainable banking system.[40]

Reforms to date include:

- amendments to the Corporations Act (including the introduction of the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth)); and
- the transfer of market supervision from the Australian Stock Exchange (ASX) to the Australian Securities and Investment Commission (ASIC).

Consideration of the Australian carbon market included the proposed Corporations Regulations (discussed in ss 2.4 and 2.5 of chapter one) which would treat an AEU as a financial product. The deliberations of the MPCCC and *Review Update* by the Garnaut Review are ongoing as 15 May 2011.[41]

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[36] Soros, above n 3, 111, 116-117.

[37] Garnaut and Llewellyn-Smith, above n 3, 77; Giesst, above n 3, 348.

[38] Garnaut and Llewellyn-Smith, above n 3, 54. Deregulation has long been recognised as a potential systemic risk. In 2000, Thomas F Hellmann, Kevin C Murdock and Joseph E Stiglitz noted that as prudential deregulation has occurred, financial crises have become more frequent: Thomas F Hellmann, Kevin C Murdock and Joseph E Stiglitz, 'Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?' (2000) 90 *The American Economic Review* 147, 148-149. Such prudential deregulation included financial market liberalisation (which decreases the barriers to entry and increases competition, thus encouraging risk taking behaviour), reduced restrictions imposed on banks and the removal of barriers to previously restricted activities (including derivatives).

[39] The Treasury Australian Government, 'Improving Australia's Framework for Disclosure of Equity Derivative Products: Determining the degree of effective control obtained through equity derivatives and identifying appropriate disclosure requirements' (Issues Paper, The Treasury, Australian Government, June 2009).

[40] The Treasury Australian Government, 'Competitive and Sustainable Banking System' (Discussion Paper, The Treasury, Australian Government, 2010).

[41] Minister for Climate Change and Energy Efficiency, the Hon Greg Combet AM MP, 'Garnaut Review Terms of Reference', (Press Release, GC36/10, 11 November 2010).

In the US, response included the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) (Dodd-Frank Act), signed into law by President Obama on 21 July 2010, effective 1 July 2011.[42] Of particular importance to carbon markets and this thesis is the report released on 18 January 2011 by the Interagency Working Group for the Study on Oversight of Carbon Markets, under the auspices of the US Commodity Futures Trading Commission (CFTC) (see Box 7.2), 'Report on the Oversight of Existing and Prospective Carbon Markets.'

In Europe, response to the GFC included the de Larosière report, 'The High Level Group on Financial Supervision in the EU' and the report by the House of Lords (European Union Committee) 10th Report of Session 2009-10 'The future regulation of derivatives markets: is the EU on the right track?,' as well as the establishment of the European Securities and Markets Authority (*ESMA*).[43]

The carbon market response in the EU included the amendments to *Commission Directive 2003/87/EC* by *Commission Directive 2009/29/EC* that required the EC to investigate the integrity of the EU ETS. On 21 December 2010 the EC released 'Communication from the Commission to the European Parliament and the Council: Towards an enhanced market oversight framework for the EU Emissions Trading Scheme.' Further, its registry working group has been developing (and continues to develop) legislative proposals for amendments to the Registry account rules. On 5 May 2011, draft Commission regulations for the EU Registry 'to implement urgent security provisions and other improvements, with immediate effect' were released.[44]

In New Zealand, the terms of reference for a review of the NZ ETS were released on 11 March 2011, with a report due on 30 June 2011.

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[42] The *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010* (US) (Dodd-Frank Act) followed the United States Treasury Department, 'Financial Regulatory Reform' (White Paper, United States Treasury Department, 17 June 2009), and other legislative reform proposals, including: *Comprehensive Derivatives Regulation Act of 2009* (US) (S 1691); *Restoring American Financial Stability Act of 2010* (US) (S 3217) and the *Wall Street Reform and Consumer Protection Act of 2009* (US) (H.R. 4173) which passed the House of Representatives by a vote of 223 to 202.

[43] See Niamh Moloney, 'The European Securities and Markets Authority and Institutional Design for the EU Financial Market - A Tale of Two Competences: Part (1) Rule-Making' (2011) 12 *European Business Organization Law Review* 41.

[44] Commission Regulation (EU) No .../.. of [...] establishing a Union Registry for the trading period commencing 1 January 2013, and subsequent trading periods, of the Union remisisons trading scheme pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision 280/2004/EC of the European Parliament and of the Council and amending Regulations (EC) No 2216/2004 and (EU) No 920/2010 (Draft 5 May 2011) (*draft EU Registry regulations*).

2. REFORM IN OVERSEAS CARBON MARKETS

This chapter now analyses[45] the various proposals to stem speculative behaviour and activity that disrupts (or could disrupt) carbon markets. As part of the comparative law analysis, this thesis contrasts these proposals to the synchronisation rule and enhanced carbon market integrity regime. An important parallel must be noted. In rights to emit GHG, as with mortgages, the derivatives markets will be much bigger than the primary and secondary markets:[46]this has been the case with the EU ETS,[47] as it has been expected to be the case with all emissions trading schemes.[48]

Post-GFC market reviews in Europe and the US included consideration of the performance of carbon markets. These reviews and their recommendations (in the case of the EU ETS, the draft registry regulations, and in the case of the APA, draft legislation) address the lessons learned from operational emissions trading schemes and the GFC. They outline post-GFC regulation for the Australian carbon market.

This chapter considers the current and ongoing reform in carbon markets occurring in Europe and the US. The review process recently commenced in New Zealand is also examined.

2.1. Europe

As noted in chapter two, the EU ETS covers 30 countries – the 27 EU member States (EU-27) plus Norway, Liechtenstein and Iceland. There is a very small primary market, because EUAs were allocated free by EU member States under their National Allocation Plans (NAPs), rather than auctioned. The division of trading between the spot market (the secondary market)[49] and the futures and derivatives market reveals that

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[45] This analysis is essentially, as Philip Mirowski (2010) urges, 'the quest to uncover deeper forces:' Philip Mirowski, 'Inherent Vice: Minsky, Markomata, and the tendency of markets to undermine themselves' (2010) 6 *Journal of Institutional Economics* 415, 418.

[46] 'Forward trading is often at multiples of the underlying physical market:' Ross Garnaut, 'Financial Services for Managing Risk: Climate Change and Carbon Trading' (Issues Paper 2, Garnaut Climate Change Review, December 2007), 6.

[47] European Commission, Directorate-General on Climate Action, 'Emissions Trading: Q & A following the suspension of transactions in national ETS registries for at least one week from 19:00 CET on Wednesday 19 January 2011' (Memo/11/34, Directorate-General on Climate Action, 21 January 2011), noting that the spot market in Europe accounted for 20 per cent of the total market activity.

[48] Anthony Collins and Sally Palmer, 'The Role of Financial Markets in Emissions Trading' (2008) 27 *Australian Resources and Energy Law Journal* 41, 45-49.

[49] This division of trading activity ignores the period from mid- January 2011 until mid-April 2011 when spot markets were mostly closed, as a result of thefts of EUAs and the consequent need to upgrade Registry account security.

over 80 per cent of trading in the EU ETS occurs in the futures market.[50]

The European Commission has not ignored the lessons discussed in chapter four and has commenced the processes of improving the integrity of the EU ETS.

The design philosophy of the EU ETS has evolved. The scheme rules aim to directly connect the manner in which EUAs are traded and the attainment of the environmental objective of reducing GHG emissions. Experience in the EU ETS has taught the EU painful lessons, such as carousel fraud and theft of EUAs, causing some registries to close for up to four months in early 2011.[51] New Directives appropriately recognise that an orderly carbon market is in the public interest, and demonstrate a move to fetter ownership rights in EUAs to protect installations, the Government revenue and consumers.

A. Commission Directive 2009/29/EC and Commission Regulation 2010/1031

As noted in s 3.10C of chapter two, new Article 10(5), new Article 12(1a) and new Articles 29 and 29a have been inserted into Commission Directive 2003/87/EC by Commission Directive 2009/29/EC. Additionally, *Commission Regulation (EU) No 1031/2010* provides for EU ETS auction regulations from 1 January 2013. Together these instruments provide the broad foundations for improved regulatory oversight of the EU ETS and create the framework for an enhanced carbon market integrity regime. The goal is an orderly (credible and reliable) EU ETS that delivers emissions reductions.

The Commission is granted greater powers to gather information about the carbon market, and is required to monitor and report on the functioning of the market.[52] That report is to include information on the implementation of auctions, liquidity and the

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[50] European Commission, D-G ClimA, 'Emissions Trading', above n 47. In the European Commission, Communication from the Commission to the European Parliament and the Council, 'Towards an enhanced market oversight framework for the EU Emissions Trading Scheme', (COM (2010) yyy [sic] final, European Commission, 21 December 2010) (*Market Oversight Communication*) it was noted (at 3) that 'the two largest groups of market participants are the power companies, who are the biggest emitters of greenhouse gases among the participating sectors, and the financial intermediaries.'

[51] European Commission, Directorate-General on Climate Action, 'EU ETS Registries: Transitional measure to end on 20 April with the reinstatement of the national registry of Lithuania', (Press Release, Directorate-General on Climate Action,19 Apr 2011). The Commission announced that the national emissions registry of Lithuania would resume normal operations on 20 April 2011 at 3 pm CEST, bringing to an end the EU ETS wide transitional measure imposed in January 2011 which suspended national EU ETS registries following cases of cyber-crime.

[52] Commission Directive 2003/87/EC, art 10(5).

volumes traded. The Commission will need to know who is participating in the market and who is influencing the market. This is one reason why the European Commission will assume responsibility for a single Registry account for the EU ETS from 1 January 2013. It is also the reason why the Commission may seek to ensure that futures and derivatives trading, which currently accounts for more than 80 per cent of all EU ETS volume, must be settled on a public exchange.

The Commission is encouraged to be pro-active in the carbon market. New Article 29 requires reporting to Parliament and continuous improvement to ensure the orderly functioning of the carbon market:

> If, on the basis of the regular reports on the carbon market referred to in Article 10(5), the Commission has evidence that the carbon market is not functioning properly, it shall submit a report to the European Parliament and to the Council. The report may be accompanied, if appropriate, by proposals aiming at increasing transparency of the carbon market and addressing measures to improve its functioning.

The Commission Directive does not specify the attributes of a properly functioning carbon market. However, it may be inferred, for example, from recitals 5 and 15 of Commission Directive 2003/87/EC, that an important attribute is a market that achieves the highest possible degree of economic efficiency *and* provides a predictable path for emissions reductions by installations. A properly functioning market would be a fair and orderly carbon market, as posited by this thesis.

The Commission is empowered to examine whether the EU ETS is sufficiently protected from insider trading and market manipulation, and also to intervene in the EU ETS in the event of excessive price fluctuations. Article 29a gives the Commission a retro-active power by providing (inter alia):

> 1. If, for more than six consecutive months, the allowance price is more than three times the average price of allowances during the two preceding years on the European carbon market, the Commission shall immediately convene a meeting of the Committee established by Article 9 of Decision No 280/2004/EC.
> 2. If the price evolution referred to in paragraph 1 does not correspond to changing market fundamentals, one of the following measures may be adopted, taking into account the degree of price evolution:
>   (a) a measure which allows Member States to bring forward the auctioning of a part of the quantity to be auctioned;
>   (b) a measure which allows Member States to auction up to 25 % of the remaining allowances in the new

entrants reserve.

As noted in s 3.5B of chapter two, the auction regulations for the EU ETS were designed to improve the integrity of the European carbon market.[53] In Commission Regulation (EU) No 1031/2010 'market abuse,' 'insider dealing' and 'market manipulation' have been identified and defined.[54] Further, the auction platforms ensure that:

> safeguards include arrangements to identify and manage the potential adverse consequences of any conflicts of interest for the operation of the regulated market or its participants; to identify and manage the risks to which they are exposed and to put in place effective measures to mitigate them; to provide for the sound management of the technical operations of their systems establishing effective contingency arrangements to cope with risks of systems disruptions; to have transparent and non-discretionary rules and procedures for fair and orderly trading and establish objective criteria for the efficient execution of orders; to facilitate the efficient and timely finalisation of the transactions executed under their systems; to have available sufficient financial resources to facilitate their orderly functioning, having regard to the nature and extent of the transactions concluded on the market and the range and degree of risks to which they are exposed.[55]

B. Communiqué of the European Commission of 21 December 2010

New Article 12(1a) of Commission Directive 2003/87/EC provides:

> The Commission shall, by 31 December 2010, examine whether the market for emissions allowances is sufficiently protected from insider dealing or market manipulation and, if appropriate, shall bring forward proposals to ensure such protection. The relevant provisions of Commission Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) may be used with any appropriate adjustments needed to apply them to trade in commodities.

[53] Commission Regulation (EU) No 1031/2010.

[54] The relevant definitions in art 3 are: art 3.27: 'market abuse' means 'either insider dealing as defined in point (28) of this art or prohibited in art 38 or market manipulation as defined in point (30) of this art or in art 37(b), or both.' art 3.28: 'insider dealing' means 'the use of inside information as prohibited pursuant to Articles 2, 3 and 4 of Commission Directive 2003/6/EC in relation to a financial instrument within the meaning of art 1(3) of Commission Directive 2003/6/EC referred to in art 9 of that Commission Directive unless otherwise stated in this regulation.' art 3.29: 'inside information' means 'the same as in art 1(1) of Commission Directive 2003/6/EC in relation to a financial instrument within the meaning of art 1(3) of Commission Directive 2003/6/EC referred to in art 9 of that Commission Directive unless otherwise stated in this regulation.' art 3.30: 'market manipulation' means 'the same as in art 1(2) of Commission Directive 2003/6/EC in relation to a financial instrument within the meaning of art 1(3) of Commission Directive 2003/6/EC referred to in art 9 of that Commission Directive unless otherwise stated in this regulation.'

[55] Ibid Recital 29.

A communication from the Commission to the European Parliament and the Council dated 21 December 2010, 'Towards an enhanced market oversight framework for the EU Emissions Trading Scheme' (*Market Oversight Communication*), provided an initial assessment of the integrity of the EU ETS. Although the EU ETS has been operating since 1 January 2005 and its turnover in 2010 exceeded €100 billion, the Commission noted that 'it remains a relatively young market. It is therefore important to ensure that the market can continue to expand and safely be relied upon to give an undistorted carbon price signal.'[56] The headline conclusion of the Commission was that the European carbon 'market needs to have an appropriate market oversight framework.'[57]

The Market Oversight Communication addressed market functionality by considering market abuse, not only in its technical sense – insider trading and market manipulation as defined in Commission Directive 2003/6/EC[58] (the *Market Abuse Commission Directive*) – but also by noting that the market oversight framework:

> needs to secure fair and efficient trading conditions for all market participants through transparency requirements as well as by preventing and sanctioning market misconduct ... Such a framework should also provide safeguards to minimise the risk that the carbon market is used as a vehicle for other illegal activities.[59]

Money laundering, terrorist financing and other criminal activities are extreme forms of market misconduct and abuse. The Commission appropriately noted three incidents which occurred in the European carbon markets during 2009 and 2010 as illustrative of 'the wider range of risks that need to be dealt with:'[60] value added tax (VAT) fraud, phishing attacks and CER recycling (the resale in the EU ETS by a member State of CERs that had already been used for EU ETS compliance).

The Commission, noting the split of the carbon market into spot and futures market, and their relative size, drew four preliminary conclusions on the extent to which the existing regulatory framework ensures that 'the integrity of the carbon market is sufficiently protected.'[61] These conclusions were:

> (1) **The carbon market has developed well in terms of liquidity, EU-wide participation of intermediaries and transparency,**

[56] Market Oversight Communication, above n 50, 2.
[57] Ibid.
[58] Commission Directive (EC) 6/2003.
[59] Market Oversight Communication, above n 50, 2.
[60] Ibid 6. Chapter four of this thesis highlights carousel fraud as one of the lessons to be learned.
[61] Ibid.

which, other things equal, reduces the risks of market abuse compared for example to some commodities markets. The emergence of climate exchanges alongside the over-the-counter market and the strong participation of financial intermediaries alongside compliance buyers are signs that the European carbon market has matured significantly.

(2) **A major part of the carbon market is subject to market regulation already**. To the extent that the allowance derivatives market is within the scope of financial markets legislation, it benefits from the regular safeguards and supervisory arrangements that apply to any other market for commodity derivatives.

(3) **Spot trading in emission allowances is currently not regulated at the European level**. A handful of Member States have individually decided to extend rules applicable to trading in financial instruments to such allowances when traded on spot markets established within their jurisdiction.

(4) **A key future segment in the primary market, auctions, will come in full under the market oversight regime set out by the Auctioning Regulation**, irrespective of whether the auctioned product qualifies as a financial instrument or not. This will further diminish vulnerability of the carbon market to misconduct.[62]

These conclusions by the Commission understate the risks to the EU ETS. The cascading emergency shut-down of the EU ETS from mid-January 2011 demonstrated just how wrong the Commission's initial assessment was, just one month before the mid-January 2011 event.

The Commission noted:

> the carbon market's continued growth and its ability to provide an undistorted carbon price signal are in part conditioned by that market's ability to deal effectively with the risks of market abuse and other forms of misconduct.[63]

Accordingly, the Commission launched an in depth study of the structure of the carbon market and the current level of market oversight, focusing on:

- insider trading, market manipulation and supervisory aspects;
- overall integrity of auctions and trading; and
- revision of financial legislation and consistency with energy markets legislation.

This study, and its consultation and analysis, are ongoing as at 15 May 2011.

[62] Ibid 10 (emphasis in original).
[63] Ibid.

On 23 February 2011, the Commission announced the first series of actions to enhance registry security and combat fraud.[64] In addition to the closure of the spot carbon market, significant short term measures included:

> - a review and strengthening of policies concerning the **opening of registry accounts**, building on best practice, and a **risk based review of existing registry account holders**;
> - facilitation of information exchange between Member States regarding **suspicious requests to open an account;**
> - **modification of the EU Registry Regulation** so as to give a stronger legal basis for measures to protect the integrity of the carbon market and uphold the reputation of the EU ETS.[65]

Ideas considered at a meeting of stakeholders held 15 March 2011[66] included:

- setting security standards in the single EU ETS registry at the highest possible level;
- introducing a delivery delay mechanism in the Registries Regulation, so as to increase the likelihood of stopping fraudulent transfers of allowances before execution and transmission;
- differentiating account categories, and introducing a specific account category for companies with compliance obligations under the EU ETS. This new account category would only allow for transfer of allowances to an account held by the same company and for surrendering;
- further differentiating between operator holding accounts and person holding accounts in particular, and creating a default account category for the latter which would only allow for transfers out of the account with a delay mechanism and subject to daily or transactions limits;
- displaying the serial numbers of allegedly stolen allowances; and
- classification of allowances as financial instruments to enhance carbon market oversight.

Ideas considered at a meeting of stakeholders held 4 May 2011[67] included:

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[64] European Commission, 'Emissions trading: Commission outlines actions to enhance registry security and combat fraud' (Memo IP/11/219, Directorate-General for Climate Action, 23 February 2011).
[65] Ibid 1 (emphasis in original).
[66] European Commission, 'ECCP stakeholder meeting on ETS registry security and stolen allowances' (Agenda, Directorate-General on Climate Action, 15 March 2011).
[67] European Commission, 'ECCP stakeholder meeting on carbon market oversight and integrity' (Agenda and Discussion Paper, Directorate-General on Climate Action, 4 May 2011).

- bringing tighter controls to the access to the carbon market;
- barring potential perpetrators from engaging into transactions through intermediaries;
- subjecting all market participants to the Market Abuse Commission Directive;
- making transactions between two exempt market participants outside regulated exchanges examinable for market abuse; and
- requiring licensed intermediaries to increase their customer due diligence including under the anti-money laundering rules.

The outcomes of this stakeholder meeting included the release of further draft regulations, discussed in 2.1C of this chapter.

In light of the events of early 2011, the Commission restated its objectives:

> As a matter of priority, the following objectives should be fulfilled in any forthcoming proposal enhancing carbon market oversight:
> 1. comprehensive and cross-border supervision of the carbon market with robust rules for detecting and sanctioning cases of market misconduct or abuse
> 2. high standards of market transparency and investor protection
> 3. a level playing field for intermediaries and trading venues active in the various parts of the carbon market (primary and secondary, spot and derivatives)
> 4. consistency with the EU ETS Commission Directive and the Auctioning Regulation, financial markets regulations and energy markets regulations
> 5. a regime where the costs to market participants are proportionate to the benefits of enhanced market integrity[68]

The synchronisation rule and enhanced carbon market integrity regime proposed by this thesis sit well within these priorities.

C. Draft Union Registry regulations 5 May 2011

On 5 May 2011, and following the meeting of stakeholders on 4 May 2011, the Commission released a draft for consultation of revised regulations, to provide for the rules for the single EU Registry (called the Union Registry) operative from 1 January 2013, and to 'implement urgent security provisions and other improvements, with immediate effect.'[69]

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[68] Ibid Discussion Paper, 2.
[69] Draft EU Registry regulations, above n 44.

The draft EU Registry regulations represent a further significant shift towards limiting participation in the EU ETS. The draft EU Registry regulations build upon the EU ETS auction regulation promulgated in late 2010 (discussed in s 3.5B of chapter two). The restoration of credibility in the EU ETS lies at the heart of these latest proposals.

A new definition of 'account holder' captures a natural or legal person that holds an account in the registries system.[70] The account holder may only have one type of account. This may be either an 'operator holding account' (and these are limited to one for each installation within the EU ETS) or, if approved by the national administrator, a 'person holding account' or a 'trading account.'[71]

Account status shall be limited to: open, blocked, inactive or closed.[72] Accounts may also have a 'trusted account list.'[73] The only processes permitted from blocked accounts are the entering of verified emissions, surrendering of allowances, and updating account details. No processes are permitted at all from closed or inactive accounts, Further, closed accounts cannot be re-opened.[74]

Each account is to have a national administrator, who shall be responsible for account opening, and be governed by the laws and fall under the jurisdiction of the member State of their administrator.[75] Each account is also to have at least two authorised representatives, who shall initiate transactions and other processes on behalf of the account holder.[76]

Different rules apply to the opening and maintenance of an operator holding account, and to the opening and maintenance of person holding and trading accounts.

Installations that are liable entities require a GHG emissions permit. Additionally, to open an operator holding account the applicant must still provide detailed identification information (in the same name as the permit holder) about the account holder and its contact person and its authorised representatives.[77] A signed statement from the account holder must be included indicating that it wishes to nominate a particular person as

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[70] Ibid art 3(1).
[71] Ibid Annex I.
[72] Ibid art 9(1).
[73] Ibid art 24.
[74] Ibid arts 9(2)-(3).
[75] Ibid art 10. The location of an account shall also determine the territorial nexus of the units in the account.
[76] Ibid art 21.
[77] Ibid art 14 and Annex V, art 22 and Annex VII.

authorised representative (or additional authorised representative) confirming that the authorised representative has the right to initiate or to approve transactions on behalf of the account holder and indicating any limitations to that right. An identity card or passport as evidence to support the identity of the nominee must also be provided, as well as evidence confirming the physical address of the place of business of the account holder and the residence of the authorised representatives.

The criminal record of the nominee (if any) must be provided.[78]

Applications for a person holding account or trading account must be made to the national administrator,[79] who may require the prospective account holder to have a permanent residence and/or be registered for VAT in the member State of the administrator.[80] Such application must contain the following information (as a minimum):[81]

1. The information set out in Table II-I. (The account ID and the alphanumeric identifier are to be unique within the registry system.)
2. Proof that the person requesting the account opening has an open bank account in a Member State of the European Economic Area.
3. Evidence to support the identity of the natural person requesting the account opening, which may be a copy of one of the following:
    (a) an identity card issued by a state that is a member of the European Economic Area or the Organisation for Economic Co-operation and Development;
    (b) a passport.
4. Evidence to support the address of the permanent residence of the natural person account holder, which may be a copy of one of the following:
    (a) the identity document submitted under point 3, if it contains the address of the permanent residence;
    (b) any other government-issued identity document that contains the address of permanent residence;
    (c) if the country of permanent residence does not issue identity documents that contain the address of permanent residence, a statement from the local authorities confirming the nominee's permanent residence;
    (d) any other document that is customarily accepted in the Member State of the administrator of the account as evidence of the permanent residence of the nominee.
5. The following documents in case of a legal person requesting the

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78 Ibid Annex VII, item 5.
79 Ibid art 16.
80 Ibid.
81 Ibid art 16 and Annex III.

account opening:

(a) a copy of the instrument establishing the legal entity or a copy of a document proving the registration of the legal entity;
(b) a copy of the last company memorandum or Articles of Association;
(c) bank account details;
(d) a confirmation of VAT registration;
(e) information on the legal entity's beneficial owner as defined in Commission Directive 2005/60/EC;
(f) list of directors;
(g) a copy of the annual report or of the latest audited financial statements, or if no audited financial statements available, a copy of the financial statements stamped by the tax office or the financial director.

6. Evidence to support the registered address of the legal person account holder, if this is not clear from the document submitted in accordance with point 5.
7. The criminal record of the natural person requesting the account opening or if it is a legal person, of its directors.

The national administrator is required to verify that the information and documents for account opening are 'complete, up-to-date and true.'[82] Further, the national administrator is granted discretion to refuse to open an account if:

(a) if the information and documents provided are incomplete or erroneous or fake;
(b) if the prospective account holder, or, if it is a legal person, any of the persons effectively directing the day-to-day operation of the prospective account holder, is under investigation or has been convicted in the preceding five years for fraud involving allowances or Kyoto units, money laundering, terrorist financing or other serious crimes for which the account may be an instrument;
(c) if the national administrator has reasonable grounds to believe that the accounts may be used for fraud involving allowances or Kyoto units, money laundering, terrorist financing or other serious crimes;
(d) for reasons set out in national law.[83]

Accounts are to be blocked if verified emissions data have not been recorded in the EU Registry by the end of the relevant compliance year (31 March).[84]

The central administrator or a national administrator would be vested the discretion to close and suspend accounts. A national law enforcement authority in the EU also may

[82] Ibid art 20.
[83] Ibid.
[84] Ibid art 33.

request a closure or suspension.[85]

In a further shift to tighten the EU ETS, the new rules also provide that only transactions provided for in the EU registry regulations may be initiated by any account type. The draft EU registry regulations propose that a delay of 24 hours apply between initiation of a transaction and the transfer being communicated for finalisation, so that in this period, an account representative may propose the cancellation of the transaction on the grounds of suspicion of fraudulent initiation.[86] To improve credibility, 'holding an allowance or Kyoto unit in the Union Registry shall constitute conclusive evidence of the account holder's ownership of the allowance or Kyoto unit.'[87] Further, transfer of the allowance or Kyoto unit shall constitute conclusive evidence of the change of ownership of the allowance or Kyoto unit.

Critically, two new Articles 60 and 61 prescribe trading within the EU ETS:

> Article 60
>
> *Transfers of allowances or Kyoto units initiated by a holding account*
>
> Upon request of an account holder of a holding account, the Union Registry shall carry out a transfer of allowances or Kyoto units to an account on the trusted account list of the account holder unless if such a transfer is prevented by the status of the initiating or receiving account.
>
> Article 61
>
> *Transfers of allowances or Kyoto units initiated by a trading account*
>
> Upon request of an account holder of a trading account, the Union Registry shall carry out a transfer of allowances or Kyoto units to another holding or trading account in the Union Registry unless such a transfer is prevented by the status of the initiating account.

Only genuine trading activities of non-liable entities will pass.

The proposals of this thesis are aimed at the same objective for an Australian ETS.

2.2. US

The GFC was the catalyst for the Dodd-Frank Act and the market integrity rules proposed in the ACES Act/APA.[88]

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[85] Ibid ss 3 (arts 25-30), 4 (art 31).
[86] Ibid art 36.
[87] Ibid art 37.
[88] During the 110th and 111th Congress of the US Parliament, and progressing at the same time as the various Bills and Acts that eventually became the Dodd-Frank Act there were a number of Bills introduced into the US Parliament in an endeavour to introduce a cap-and-trade economy wide (Federal) ETS. For an analysis of various proposals, see, eg, PEW Centre on Global Climate Change, 'Economy-wide Cap-and-Trade Proposals in the 110th Congress' (Report, PEW Centre on Global Climate Change, 30 January 2008); PEW Centre on Global Climate Change, 'Comparison of the American Clean Energy

Recall that Senators Lieberman and Kerry said of the APA that ‘this is not a plan that enriches Wall Street speculators.’[89]

Rather the design of the US ETS required:

> The system must be simple, stable and secure. We only address the largest sources of carbon pollution and we provide predictability to businesses and consumers through a hard price collar and the creation of a single, clear set of rules. *Our carbon market structure eliminates the possibility of manipulation*, which will mean a secure, well-functioning market system.[90]

In relation to blocking market manipulation, they said:

> The bill only requires the largest sources of pollution to comply with reduction targets: those who produce more than 25,000 tons of carbon pollution annually. This means the program only focuses on 7,500 factories and power plants.
>
> Participation in the auction and primary cash markets is restricted to entities with a compliance obligation and a limited number of ‘market makers’.
>
> Participation in the secondary market will be open to all participants, but it will only exist on a cash-cleared basis. It will be highly regulated, exchange traded, and transparent.[91]

The ‘cause of emissions trading suffered a stunning defeat in Washington in mid-2010.’[92]

Although a federal cap-and-trade ETS may be stalled, a cap-and-trade ETS will commence in California, the 8th largest economy in the world, from 1 January 2012.[93]

Participation in the California Cap on Greenhouse Gas Emissions scheme is restricted.

Box 7.3 summarises the mechanism for registration and accounts in the *California Cap on Greenhouse Gas Emissions* regulations.[94]

Act of 2009 (Waxman-Markey) and the American Power Act (Kerry-Lieberman)' (Report, PEW Centre on Global Climate Change, June 2010).

[89] US Senator Lieberman, *American Power Act of 2010 (Short Summary)* (12 May 2010), <http://lieberman.senate.gov/assets/pdf/APA_sum.pdf>.

[90] Ibid (emphasis added).

[91] Ibid 5.

[92] International Emissions Trading Association, 'IETA Priorities for 2011' (Report, International Emissions Trading Association, December 2010) [10].

[93] The Californian ETS is not analysed in detail in this thesis because it is not a national or supra-national ETS, in the manner of the EU ETS, the NZ ETS, or the CPRS.

[94] Title 17, *California Code of Regulations*, 'California Cap on Greenhouse Gas Emissions' (2010).

Box 7.3 California's cap-and-trade ETS

CALIFORNIA'S CAP-AND-TRADE ETS
The California cap-and-trade scheme will commence 1 January 2012. It is a centre-piece of ambitious Californian environment legislation known as AB32. Subchapter 10 (Climate Change, Article 5, Sections 95800 to 96022) of Title 17, *California Code of Regulations,* detail the California Cap on Greenhouse Gas Emissions. Participation in the California Cap on Greenhouse Gas Emissions scheme is restricted. Sub-article 5 (registration and accounts) provides that an account may not be opened unless the applicant provides (inter alia) a 'statement of basis for qualifying for registration' (pursuant to ss 95811, 95813, or 95814 of the California Code of Regulations).

Market oversight continues to be a major concern of post-GFC regulation in the US.

The CFTC[95] received substantially increased powers under the Dodd-Frank Act, in particular to protect markets from excessive speculation.

The CFTC was charged under §750 of the Dodd-Frank Act to establish an interagency working group to 'conduct a study on the oversight of existing and prospective carbon markets to ensure efficient, secure, and transparent carbon markets, including oversight of spot markets and derivative markets.'[96] The Interagency Working Group for the Study on Oversight of Carbon Markets released its report on 18 January 2011 titled 'Report on the Oversight of Existing and Prospective Carbon Markets' (*Interagency Oversight Report*).

The Interagency Oversight Report noted:

> Effective oversight could serve a role in promoting market transparency by ensuring that information is publicly available. In considering transparency … it is important to distinguish between information that is made publicly available, and that which is provided to regulators.[97]

Bearing in mind that the ACES Act/APA had stalled, the Interagency Oversight Report nonetheless considered market participation.

[95] Recall from chapter three that the APA proposed empowering the CFTC as the regulator of the US ETS. Also see Box 7.2.
[96] Interagency Working Group for the Study on Oversight of Carbon Markets, above n 1, 3. This statutory work proceeded, notwithstanding that the progress towards a US ETS stalled in late 2010.
[97] Ibid 15.

The Interagency Oversight Report concluded that the characteristics of the set of market participants to be targeted by market oversight provisions are important to evaluate.[98]

> Entities may wish to participate in carbon markets for a variety of reasons. Those with compliance obligations may have to either directly or indirectly participate in the market in order to ensure that they have allowances or offsets to meet their obligations, and to hedge financial exposure to allowance and offset price movements. In addition, if carbon markets allow for the use of carbon offsets, entities may wish to participate in the market to sell offsets that they produce, or to hedge against exposure to changes in the market price of credits that they expect to produce. Others that do not directly face compliance obligations may nonetheless wish to participate in carbon markets to hedge against indirect financial exposure to allowance and offset prices, to participate as intermediaries or liquidity providers in the market, or to make investments based on expected future price movements.

The Interagency Oversight Report confirmed that the 'number, identity, and characteristics of participants in carbon markets depend, in part, on policy decisions regarding whose emissions are covered by the carbon market.'[99] Four policy objectives guide market oversight. It should:

- facilitate and protect price discovery in carbon markets;
- ensure appropriate levels of carbon market transparency;
- allow for appropriate, broad market participation; and
- prevent manipulation, fraud and other market abuses.

Aware of the policy link between participation and oversight, the Interagency Oversight Report did not consider the option of a synchronisation rule tying liability under the ACES Act/APA with participation in the US ETS. Open participation would be constrained by an oversight regime for the three markets that collectively make up the carbon markets: the primary market, the secondary market and the derivatives market.

Table 7.1 summarises the recommended oversights.

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[98] Ibid 37.

[99] Ibid. The Interagency Oversight Report noted:

> in allowance markets, there will not be any allowance 'producers' to constitute a set of natural counterparties for regulated entities that want to hedge against the risk of high allowance prices. This situation suggests that market participants without direct compliance obligations or economic connections to allowance markets may need to play a relatively greater role in providing liquidity to those seeking to hedge against allowance price risks than would typically be the case in commodity markets where both producers and consumers are present.

Table 7.1: Summary of market oversight recommended by the Interagency Working Group for the Study of Oversight of Carbon Markets

SUMMARY OF MARKET OVERSIGHT RECOMMENDED BY THE INTERAGENCY WORKING GROUP FOR THE STUDY OF OVERSIGHT OF CARBON MARKETS	
Primary market	• tracking of initial ownership of allowances/credits upon introduction to the market • oversight of allowance auctions (includes implications of the auctions for efficiency, participation, price discovery, and the potential for manipulation) • oversight of the creation and verification of offset credits
Secondary market	• authority to register and track allowances and monitor trading • authority to prosecute for manipulation • authority to obtain information on allowance holdings • authority to obtain information on traders that hold positions in futures markets
Derivatives market	• regulatory oversight by the CFTC, including registration of dealers and major participants • exchange traded futures and options contracts to be subject to speculative position limits • OTC environmental swaps to be subject to the same regime

On one view, the conclusion that the Interagency Oversight Report drew as to the role of non-liable entities departed from the design of the ACES Act/APA and to an extent therefore must have been influenced by the submissions made to it,[100] for it concluded that to achieve objective three:

> Regulatory oversight should ensure that rules regarding market

[100] 23 submissions were received from a range of organisations: American Gas Association, Carbon Markets & Investors Association, Center for Resource Solutions, UBS Financial Services Inc, Flett Exchange LLC, Chicago Climate Exchange, Coalition for Emissions Reduction Projects, FERN, Green Exchange LLC, Edison Electric Institute, Pacific Carbon Exchange, Western Climate Initiative, Southern California Public Power Authority, Commodity Markets Council, Institute for Agriculture and Trade Policy, Environmental Defense Fund, Markit, Friends of the Earth, Large Public Power Council, IATP, Environmental Markets Association, International Emissions Trading Association, and Eurex Deutschland.

> participation allow entities with emission compliance obligations to efficiently meet their obligations and allow offset credit providers to bring those credits to market. More broadly, the rules and trading systems should be designed to encourage market liquidity, facilitate price discovery and allow those directly and indirectly impacted by the regulation of carbon emissions to efficiently hedge associated risks. Open market participation promotes the development of market liquidity and price discovery, which are essential to the efficient functioning of primary, secondary and derivative markets and could facilitate the ability of entities to hedge commercial risks associated with regulation of carbon emissions.[101]

This thesis concedes that the line between speculation and excessive speculation is complex, and is not only a function of market oversight, trading quantity and limits.[102]

2.3 New Zealand

On 11 March 2011, the New Zealand Emissions Trading Scheme Review Panel released an 'Issues statement and call for written submissions' for the Emissions Trading Scheme Review 2011.

Section 160(5) of the *Climate Change Response Act 2002* (NZ) (CCR Act) requires the Panel to consider the operational performance of the NZ ETS, and recommend steps that need be taken to ensure that the NZ ETS meets its objectives. The review is required under that s to take account of:

- whether an amendment to the Act is necessary or desirable;
- whether New Zealand has undertaken, or is expected to undertake, additional or new international obligations and their stringency;
- the contribution of the ETS towards any targets that are in effect;
- the types of emissions units permitted under the ETS;
- the operation of the commitment period reserve;
- potential linkages to overseas emissions trading schemes;
- the appropriateness of any methodologies prescribed for calculating emissions and removals;
- whether it is necessary or desirable to omit certain activities from the ETS, add any removal activities to the ETS and amend opt-in thresholds;
- whether changes to the provision of allocation are necessary or desirable;
- the appropriateness of penalties;

[101] Ibid 50.

[102] Commissioner Bart Chilton of the CFTC has said 'we need speculators. There is no market without them, but as we have seen, too much speculation can move prices.' Bart Chilton, 'Statement on President Obama's comments regarding speculation' (Press Release, US Commodities Futures Trading Commission, 19 April 2011).

- the implications for New Zealand's emissions and price of emission units of any notification of the Crown's intention to allocate or sell New Zealand Units;
- the impact the forestry sector's inclusion in the ETS has had on biodiversity;
- the costs and benefits of establishing an independent or quasi-independent government body to carry out all or part of the allocation process; and
- the social, economic and environmental effects of the ETS.[103]

The review excludes a consideration of market integrity.

The report of the Review Panel is due 30 June 2011.

3. REFORM IN AUSTRALIAN MARKETS

The GFC spurred action by the Australian Government, including legislative reform to regulate equities and financial markets. A consistent theme in the Australian policy and regulatory agenda has been international consistency and harmonisation of regulation that is global in its nature.[104] Analysis reveals, however, that for all the reform activity in Australia, the reforms do not reach and protect an Australian carbon market in the manner this thesis posits.

In equities and financial markets, ASIC assumed an increased responsibility in 2008.[105]

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[103] New Zealand Emissions Trading Scheme Review Panel, 'Emissions Trading Scheme Review 2011: Issues statement and call for written submissions' (Issues Paper, New Zealand Emissions Trading Scheme Review Panel, 11 March 2011).

[104] Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Adapting our architecture to challenging times' (Speech delivered at the Brookings Institute, Washington DC, 10 October 2008); Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Emerging from the crisis: the G20 and the Asia-Pacific' (Speech delivered at the Canadian Australian Chamber of Commerce, Toronto, 27 June 2010); Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Extraordinary times demand extraordinary action' (Speech delivered at the London School of Economics, London, 13 March 2009); Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Global Economic Turbulence: An update on the Government's response' (Ministerial Statement to the House of Representatives, Canberra, 22 September 2008); Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'Global Market Turbulence and the Australian Economy' (Ministerial Statement to the House of Representatives, Canberra, 18 March 2008).

[105] Since early 2009, ASIC has secured seven convictions and/or guilty pleas for insider trading, six for market manipulation and banned 11 brokers for market misconduct – more than the total for the previous eight years. ASIC now has two surveillance teams, operating real time market supervision technology in the trading exchange and monitoring information released into the market place in traditional news media and social media sites. Tony D'Aloisio, 'ASIC's approach to market integrity', (Speech delivered at the Monash Centre for Regulatory Studies and Clayton Utz Luncheon Lecture, Melbourne, 11 March 2010); Tony D'Aloisio, 'Developments in the global regulatory system', (Speech delivered at the Financial Services Council Annual conference, Melbourne, 12 August 2010); Tony D'Aloisio, 'Insider trading and market manipulation', (Speech delivered at the Supreme Court of Victoria law conference, Melbourne, 13 August 2010); Tony D'Aloisio, 'Responding to the global financial crisis: the ASIC story', (Speech delivered at the Trans-Tasman Business Circle, Sydney, 30 November 2010); Belinda Gibson, 'Recent changes to Australia's supervisory powers', (Paper presented at the 16th Annual ACLA National 2010

From 1 August 2010, ASIC assumed responsibility (from the ASX) for market operating rules (now called *ASIC market integrity rules*) and real time stock market supervision, merging two supervisory functions into one.[106]

ASIC also established a Market Disciplinary Panel[107] with the responsibility for determining breaches of market integrity rules and issuing enforcement notices.

As noted in chapter one, s 798F of the new Part 7.2A inserted into Chapter 7 of the Corporations Act empowers ASIC to supervise financial markets, the operators of which are licensed under s 795B(1).[108] A 'financial market' is defined in s 767A of the Corporations Act as:

> a facility through which:
> (a) offers to acquire or dispose of financial products are regularly made or accepted; or
> (b) offers or invitations are regularly made to acquire or dispose of financial products that are intended to result or may reasonably be expected to result, directly or indirectly, in:
> (i) the making of offers to acquire or dispose of financial products; or
> (ii) the acceptance of such offers.

The primary, secondary and derivatives markets for AEUs fit this description of a financial market, and if licensed, would be automatically subject to ASIC supervision.

The White Paper and the CPRS (Consequential Amendments) Bill do not define an Australian carbon market (nor was it ever proposed that it be defined) as a financial market licensed under s 795B(1) of the Corporations Act. The structure of the ASIC market integrity regime, the expectation of behaviour and the new compliance framework could apply to an Australian carbon market (in the same manner as discussed in chapter one that the Corporations Act and Corporations Regulations apply

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conference, Sydney, 11 November 2010). The Australian Prudential Regulatory Authority (APRA) and the Reserve Bank of Australia (RBA) also have responsibility for banking and financial markets.

106 The merging of market oversight and legislative regulations further increasing ASIC powers followed the introduction of the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth) (discussed in chapter one), in turn partly responding to a Corporations and Market Advisory Committee (*CAMAC*) report titled 'Aspects of Market Integrity.' This report (delivered 30 June 2009 to the Minister for Financial Services, Superannuation and Corporate Law, the Hon Chris Bowen MP) addressed issues referred to it by the then Minister for Superannuation and Corporate Law, Senator the Hon Nick Sherry. The CAMAC report was limited to directors' margin loans, blackout trading by directors, spreading false or misleading information and analyst briefings. The conclusions in the CAMAC report could apply to AEUs, just as they applied to securities in listed companies.

107 Discussed in s 3.2 below.

108 In the definitions of the Corporations Act a 'licensed market' is defined to mean a financial market the operation of which is authorised by an Australian market licence. Div 4 of pt 7.2 deals with the granting of an 'Australian market licence.'

to an AEU as a financial product). However, this would require an Australian Government decision as to which regulator (ASIC or ACCRA) would assume supervisory responsibility for the Australian carbon market.[109]

This thesis also argues that in order to close the gateway for market misconduct and manipulation opened by unfettered ownership there should be new Registry account opening procedures, new Part 3A liable entities and a new Part 19A in the CPRS Bill.

The chapter turns now to analyse:

- the ASIC market integrity rules;
- the Markets Discipline Panel;
- equity derivative products; and
- a new *Carbon Credits (Consequential Amendments) Bill 2011* (Cth).

3.1 ASIC Market Integrity Rules

Section 798G of the Corporations Act permits ASIC, with the written consent of the responsible Minister and by legislative instrument, to make rules (called market integrity rules) that deal with the activities or conduct of Australian licensed markets and persons in relation to those markets and financial products traded on those licensed markets. Section 798H provides that it is a civil penalty not to comply with the market integrity rules. The following entities must comply:

- operators of licensed markets;
- participants in licensed markets; and
- entities prescribed by the regulations.

Effective 1 August 2010, market integrity rules were promulgated as disallowable legislative instruments for six markets:

- ASIC Market Integrity Rules (ASX Market) 2010;[110]
- ASIC Market Integrity Rules (ASX 24 Market) 2010;[111]
- ASIC Market Integrity Rules (APX Market) 2010;[112]

[109] Cf, the task in the United States: Jonas Monast, Jon Anda and Tim Profeta, 'US Carbon Market Design: Regulating Emission Allowances as Financial Instruments' (Working Paper CCPP 09-01, Nicholas Institute for Environmental Policy Solutions, Climate Change Policy Partnership, Duke University, February 2009) 15.
[110] *ASIC Market Integrity Rules (ASX Market) 2010*, F2010L02211 made 1 August 2010.
[111] *ASIC Market Integrity Rules (ASX 24 Market) 2010*, F2010L02212 made 1 August 2010.

- ASIC Market Integrity Rules (IMB Market) 2010;[113]
- ASIC Market Integrity Rules (NSXA Market) 2010;[114] and
- ASIC Market Integrity Rules (SIM VSE Market) 2010.[115]

All of the Australian market integrity rules follow a similar approach. The structure of the regime, the expectation of behaviour and the compliance frameworks are replicated across all markets targeted by the rules. Accordingly, the market integrity rules are limited to on-market trading in the covered markets: domestic financial markets licensed under s 795B(1) of the Corporations Act.[116]

As stated above, the Australian carbon market is not defined as a financial market within any of these six market integrity rules, nor does it have its own market integrity rules.

A. Application to participants

The *ASIC Market Integrity Rules (ASX Market) 2010* (*ASX Market Integrity Rules*) apply to the market operator, market participants and other regulated entities as defined in the licensed ASX, subject to ASIC relieving any person or class of person from compliance.[117] ASX Limited is the market operator of the ASX.[118]

A participant in the defined market (i.e. the ASX market) admitted under the ASX Operating Rules[119] is a market participant, and any entity prescribed by regulations made under the Corporations Act required to comply with the ASX Market Integrity Rules will be considered a regulated entity. No regulations prescribing other entities have been promulgated.

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[112] *ASIC Market Integrity Rules (APX Market) 2010*, F2010L02208 made 1 August 2010.
[113] *ASIC Market Integrity Rules (IMB Market) 2010*, F2010L02207 made 1 August 2010.
[114] *ASIC Market Integrity Rules (NSXA Market) 2010*, F2010L02209 made 1 August 2010.
[115] *ASIC Market Integrity Rules (SIM VSE Market) 2010*, F2010L02210 made 1 August 2010.
[116] Excluding markets of BGC Partners (Australia) Pty Limited, Bloomberg Tradebook Australia Pty Ltd, Mercari Pty Ltd and Yieldbroker Pty Ltd: ASIC Regulatory Guide 214, RG214.3.
[117] *ASIC Market Integrity Rules (ASX Market) 2010* (Cth) F2010L02211, 1 August 2010, R 1.2.1. Hereinafter referred to as the *ASX Market Integrity Rules*. If a person fails to comply with a condition of waiver, such failure is a contravention liable to a maximum penalty of $1 000 000.
[118] The other prescribed market operators are Australia Pacific Exchange Limited, Bendigo Stock Exchange Ltd and National Stock Exchange of Australia Limited: Corporations Regulations R 7.1.01.
[119] 'ASX Operating Rules' (Policy, ASX Limited, 2010); 'A Guide to Becoming an ASX Participant' (Guidance Statement, ASX Limited, 2011).

The definition of market participant follows the definition of participant in s 761A of the Corporations Act:[120] a person, in relation to a financial market, who is allowed to directly participate in the market under the market's operating rules.

As discussed in s 2.6 of chapter one, the application of the market integrity rules in a carbon market to liable entities and non-liable entities is problematic because the definition of participant is reflective of the distinction between direct involvement in a market by brokers, principals and clearing entities and indirect involvement in a market by ‘clients.’ In the ASX, for example, listed companies generally do not directly participate in the market: dealings in the securities of listed companies are undertaken by brokers on behalf of clients. By way of contrast, it would be expected that all liable entities should qualify as participants in the carbon market by reason of the design of the ETS, albeit not licensed[121] or contractually bound to participate.

This thesis argues that the market integrity regime for an Australian ETS would be enhanced by application to liable and non-liable entities.

B. AEUs in the ASX market

As noted in chapter one, the White Paper and the CPRS (Consequential Amendments) Bill proposed that AEUs would be defined as a financial product for the Corporations

[120] Section 761A if the Corporations Act defines ‘participant’ as follows:

(a) in relation to a clearing and settlement facility, means a person who is allowed to directly participate in the facility under the facility’s operating rules and, when used in any of the following provisions, also includes a recognised affiliate in relation to the facility:
(i) paragraph 821B(2)(b);
(ii) subsection 822B;
(iii) sub-section 915F(2);
(iv) any other provisions prescribed by regulations made for the purposes of this subparagraph; and

(b) in relation to a financial market, means a person who is allowed to directly participate in the market under the market’s operating rules and, when used in any of the following provisions, also includes a recognised affiliate in relation to the market:
(i) paragraph 792B(2)(b);
(ii) section 793B;
(iii) section 883A;
(iv) sub-section 915F(2);
(v) paragraphs 923B(3)(a) and (b);
(vi) any other provisions prescribed by regulations made for the purposes of this subparagraph.

[121] Note the thesis proposal for the new s 147(ca) of the CPRS Bill to require the Authority to issue a greenhouse gas emission permit to the person applying to open a Registry account. This would not equal being licensed to participate in the carbon market.

Act. This proposal predated the introduction of the ASIC market integrity rules, and implies that the Australian carbon market would not be licensed under s 795B(1) of the Corporations Act. If the carbon market were to be licensed, or AEUs listed on the ASX, then it will be apparent from the following analysis that the template for the market integrity rules will require modification to reflect the nature of AEUs, and further improvement to reflect the enhanced carbon market integrity regime as posited by this thesis.

If AEUs were admitted to quotation on the ASX, then this thesis assumes that AEUs would be cash market products within the ASX Market Integrity Rules.

The ASX Market Integrity Rules distinguish between the cash market and the derivatives market (both are defined as market transactions).[122] The cash market covers transactions between market participants with the right to submit trading messages into a trading platform (trading participants) in relation to cash market products. The derivatives market covers transactions between trading participants in relation to derivatives market contracts.

'Cash market products' are:

- quoted products, which are financial products that have been granted official quotation on the ASX (hence, including AEUs if quoted); and
- warrants, financial products which are a managed fund product, an ETF Security (a financial product issued by a managed fund listed on the market) or a structured product.[123]

'Derivatives market contracts' are:

- futures market contracts (in turn defined to mean a contract in contractual terms on which futures contracts are authorised for trading by the ASX);
- options market contracts; and
- any other contracts authorised for trading as a derivatives market contract.[124]

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[122] The ASX Operating Rules also distinguish between the cash market and the derivatives market.
[123] ASX Market Integrity Rules, rule 1.4.3.
[124] Ibid.

C. ASX trading rules

Chapter five of the ASX Market Integrity Rules deals with trading. The trading rules are also supported by Part 3.2 which deals with trading (and the disclosure of trading) with a market participant as a principal and rule 3.3.2 which deals with excessive trading. Rule 3.2.5 extends the meaning of dealing as principal to associated and related persons and entities, other than where the market participant deals as a trustee of a trust in which there is no direct or indirect beneficial interest (for example, as a nominee). Rule 3.2.5 complements rule 5.1.1, which applies and extends the meaning of dealing on 'own account.'[125]

Dealing, and dealing on own account

Rule 5.1.3 provides that a market participant must 'deal fairly and in due turn with' clients' orders, and a between client orders and an order on its 'own account.' The maximum penalty for breaching this market integrity rule is $1 000 000.

An order for cash market products (i.e. AEUs) would be to the account of a market participant (as opposed to a client) where the product would be beneficially owned by the market participant. The use of the expression 'beneficial ownership'[126] does not require that the market participant be the holder within the meaning of that term in the CPRS Bill. In other words, the AEUs need not reside in a Registry account in the name of the market participant. Recall that the CPRS Bill proposes that a person would hold an eligible emissions unit if the person is the registered holder of the unit,[127] and that the registered holder, in relation to an AEU would mean the person in whose Registry account there is an entry for the unit. The CPRS Bill was silent as to whether the holder of the AEU must be its beneficial owner. Specifically, s 98A of the proposed CPRS Bill would permit the creation of equitable interests and security interests in AEUs, treatment consistent with an open derivatives market.

However, permitting undisclosed nominee relationships and mismatch in beneficial ownership and registration of AEUs in a Registry account encourages opaqueness.[128]

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[125] Rule 3.2.5 does not prohibit front running. Rule 5.8.4 imposes a firewall for dual trading.

[126] For an exposition of the principles of ownership, see Damien L Lockie and Tim Galvin, 'Ownership – Update of Foundational Principles for Revenue Laws' (2006) 9 *The Taxation Specialist* 271.

[127] CPRS Bill s 5.

[128] The thesis proposal for disclosure of beneficial ownership in the Registry account opening procedure would overcome this opaqueness.

Such treatment would be at odds with the intent of rules designed to promote disclosure. For example, rule 5.10.7 of the ASX Market Integrity Rules, dealing with nominee holdings in equity securities, prohibits the registration of an equity security in the name of a market participant if the market participant is not the beneficial owner of the equity security. The definition of equity security does not extend to financial products, and therefore, rule 5.10.7 would not apply to AEUs and their derivatives.

An order for a derivatives market product would only be to the account of a market participant if the order was entered on its behalf.

Rule 5.1.3 is supported by rule 5.1.5 which requires a market participant to allocate market transactions fairly. Again, the maximum penalty for breaching this market integrity rule is $1 000 000.

Rule 5.1.7 deals with unexecuted orders in underlying financial products. It provides:

> If a Trading Participant has or receives an Order to buy or sell an Underlying Financial Product in the Underlying Market which may materially affect:
> (a) the market price of the Underlying Financial Product in the Underlying Market; or
> (b) the level of an Underlying Index, the level of which is calculated by reference to the value of that Underlying Financial Product and other Products,
>
> the Trading Participant must not make Bids or Offers to enter into an Options Market Transaction over that Underlying Financial Product as Principal until the order in the Underlying Financial Product has been executed in the Underlying Market.

In relation to a derivatives market contract, an underlying financial product would be the AEU, and the underlying market would be the 'market in the instruments, commodities, securities or other things which underlie the derivatives market contract.'[129] The expression 'Options Market Transaction' is limited to a market transaction for one or more options market contracts, defined as a contract on the terms of an option series, which is a set of contractual terms on which options are authorised for trading by the ASX.[130]

Rule 5.1.7 is limited in its application to options contracts. It would not prohibit the creation or entering into of other structured or synthetic products. The rule is limited to the timing of placing of bids for options contracts. It would apply only if the order for

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129 ASX Market Integrity Rules, rule 1.4.3 (definitions).
130 Ibid.

the underlying product would materially affect the market price of the underlying financial product in the underlying market, and it automatically ceases to apply when the order is placed in the underlying market.

Rule 3.3.2 provides that if a retail client[131] has vested a market participant with discretion in the management of the client's portfolio assets (a managed discretionary account), then a market participant must not enter into market transactions 'where the size or frequency … may be considered excessive having regard to the investment objectives, financial situation and needs of the client and the relevant markets.'[132] Excessive trading as defined attracts a maximum penalty of $1 000 000.

However, rule 3.3.2 would not apply to trading activity which occurred upon instruction. Further, rule 3.3.2 would not apply to trading with discretion for large sophisticated corporations, for example, financial intermediaries in AEUs who do not meet the description of retail client.

<u>Manipulative trading</u>

Part 5.7 of the ASX Market Integrity Rules is an important part, dealing with manipulative trading. Manipulative trading is specifically targeted at the creation of a false or misleading appearance of:

- active trading in any product; or
- the market for any product; or
- the price of any product.

Such manipulative trading is qualitatively different to the manipulation of the carbon markets experienced in operational emissions trading schemes (discussed in chapter four).

The maximum penalty for manipulative trading is $1 000 000. The rule against manipulative trading prohibits a market participant from making a bid or offer or dealing in any product (cash products and derivatives products) either as principal or on account of any other person:

- with the intention of creating the false or misleading appearance; or

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[131] Retail client is defined by reference to ss 761G and 761GA of the Corporations Act. The definitions exclude sophisticated investors, large corporations and wholesale investors.
[132] ASX Market Integrity Rules, rule 3.3.2.

- if that is another person's intention; or
- if the market participant ought to reasonably suspect that that is another person's intention, objectively determined from the circumstances.[133]

Rule 5.7.2 separately lists the matters for which the market participant must have regarded when determining the circumstances of an order (i.e. the bid, offer or other dealing). Failure to have regard to any of them attracts a maximum penalty of \$1 000 000. The circumstances to which regard must be focused to meet the rule are:

> (a) whether the Order or execution of the Order would be inconsistent with the history of or recent trading in that Product;
> (b) whether the Order or execution of the Order would materially alter the market for, or the price of, the Product;
> (c) the time the Order is entered or any instructions concerning the time of entry of the Order;
> (d) whether the person on whose behalf the Order is placed, or another person who the Market Participant knows to be a Related Party of that person, may have an interest in creating a false or misleading appearance of active trading in any Product or with respect to the market for, or the price of, any Product;
> (e) whether the Order is accompanied by settlement, delivery or security arrangements which are unusual;
> (f) where the Order appears to be part of a series of Orders, whether when put together with other Orders which appear to make up the series, the Order or the series is unusual having regard to the matters referred to in this Rule 5.7.2;
> (g) whether there appears to be a legitimate commercial reason for that person placing the Order, unrelated to an intention to create a false or misleading appearance of active trading in or with respect to the market for, or price of, any Product; and
> (h) whether the transaction, bid or offer the execution of which is proposed will involve no change of beneficial ownership.

None of these matters correlate environmental integrity with market integrity. The eight foci in rule 5.7.2 would not require a broker to look to the provisions of the CPRS Bill. Nor would a broker be required to look beyond the AEUs in trade in the Australian carbon market. In short, it would be unlikely that these eight foci would actually reveal the behaviour which has impacted the carbon markets.

Wash trades

Part 5.8 of the ASX Market Integrity Rules applies to futures market transactions. Rule 5.8.2 provides that a market participant must not effect any futures market transaction 'where the account on behalf of which the Market Participant enters into the Futures

[133] Ibid rule 5.7.1.

Market Transaction is the same on both sides of the transaction.' The maximum penalty for so doing is $100 000.[134] The term 'account' is not defined. The intention of the wash trades rule is that it captures the one 'client' taking both positions in the one transaction. However, the rule is so narrow that it would not capture related corporations holding different accounts (because each would be a separate legal person and client), nor trading intra-group as discussed in s 1 of chapter four.

<u>Corners</u>

Rule 5.8.5 is another important rule, empowering ASIC to intervene in the market if it believes that one person, or two or more persons acting in concert, are attempting to corner the market. Section 798J of the Corporations Act empowers ASIC to suspend dealings and give directions in relation to financial products, if it forms the opinion that it is necessary or in the public interest to protect people dealing in the financial product. ASIC's discretion under rule 5.8.5 will be triggered if, in its opinion, a level of control of a quoted product has been acquired such that the quoted product cannot be obtained for delivery on existing contracts except at prices or on terms arbitrarily dictated by the holder(s) of the quoted product which are unfair, harsh, or unconscionable. In such circumstances, ASIC may:

> (a) for the purpose of enabling equitable settlement to be effected on these contracts, postpone (or from time to time further postpone) the times for deliveries on contracts for any such Quoted Product; and
> (b) at any time declare that if such Quoted Product is not delivered on any contract requiring delivery on or before the time to which delivery has been postponed such contract will be settled by payment to the party entitled to receive such Quoted Product or by the credit to such party of a fair settlement price.[135]

Rule 5.8.5 introduces an element of real-time intervention in the futures market by ASIC, a feature also proposed in the enhanced carbon market integrity regime posited by this thesis. However, the scope for rule 5.8.5 to apply in the derivatives markets for AEUs will be technically limited, because new AEUs will potentially be available through auctions (the primary market) for constant addition to the secondary market. It

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[134] Ibid rule 5.8.2.

[135] Rule 5.8.6 provides that if a fair settlement price cannot be agreed then it is to be determined by arbitration.

would be difficult to discern a corner in any market for AEUs because there should be a source from whence they could be obtained for delivery on existing contracts.

The scope for the application of transaction limits during the Registry account opening process foreshadowed in regulations to be promulgated pursuant to the Australian National Registry of Emissions Units Bill 2011 (Cth) (discussed in s 2.1B of chapter one) may provide another means of limiting market dominance in AEUs or their derivatives.

Fair and orderly market

Many aspects of the ASX Market Integrity Rules (if applicable to AEUs) may indeed promote a fair and orderly carbon market. For example:

- Part 5.3 (Large Order Facilitation) prescribes rules (again assuming that AEUs would be prescribed as an underlying commodity) for action a market participant must take when there are insufficient opposite orders in futures markets contracts;
- rule 5.4.2 requires internal consent to be obtained for every trade by connected persons; and
- rule 5.5.3 requires a trading participant to have in place arrangements for determining the origin of all orders and trading messages, thereby facilitating record keeping and audit and investigation by the regulator.

Rule 5.5.2 is an important rule, breach of which attracts a maximum penalty of $1 000 000:

> A Trading Participant must have and maintain the necessary organisational and technical resources to ensure that:
> (a) Trading Messages submitted by the Trading Participant do not interfere with:
> (i) the efficiency and integrity of the Market; or
> (ii) the proper functioning of a Trading Platform; and
> (b) the Trading Participant complies at all times with these Rules and the Market Operating Rules.

A similar rule for automated trading is prescribed in rule 5.6.1. These rules, per se, do not prohibit trading which interferes with the integrity of the market (for example, high frequency and algorithmic program trades[136]). They are directed at ensuring that internal systems within market participants do not permit trading messages which might so do (for example, as caused the 'flash crash' on 6 May 2010[137]).

Part 5.9 of the ASX Market Integrity Rules is titled 'Fair and orderly markets.' Rule 5.9.1 provides:

> A Market Participant must not do anything which results in a market for a Product not being both fair and orderly, or fail to do anything where that failure has that effect.

The maximum penalty for breaching rule 5.9.1 is $1 000 000.

Section 792A of the Corporations Act requires ASX Limited, as the market licensee, to do all things necessary (to the extent it is reasonably practicable) to ensure that the market is 'fair, orderly and transparent.'[138] Section 793C complements s 792A and vests the Federal Court of Australia with power to order compliance with or enforcement of the operating rules. As noted in chapter one, s 793C provides that if a person who is under an obligation to comply with or enforce any of a licensed market's operating rules fails to meet that obligation, an application to the Court may be made by ASIC, by the ASX or by a person aggrieved by the failure. Subsection 793C(3) provides:

> For the purposes of this section, a body corporate that is, with its acquiescence, included in the official list of a licensed market, or an associate of such a body corporate, is taken to be under an obligation to comply with the operating rules of that market to the extent to which those rules purport to apply to the body corporate or associate.

The Explanatory Memorandum accompanying the *Corporations Amendment (Financial Market Supervision) Act 2010* (Cth) reinforces the limited scope of the rules to persons who are not participants.[139]

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[136] High frequency and algorithmic program traders have been described by Commissioner Mr Bart Chilton of the US *Commodities Futures Trading Commission* (*CFTC*) as 'cheetahs.' Bart Chilton, 'New Species: How Market Participants have Evolved in Financial Ecosystems' (Speech delivered at the American Public Gas Association, Winter Conference, Fort Myers, 1 February 2011); Bart Chilton, 'Third Rock from the Sun ... The Small World of Financial Markets' (Speech delivered at the Marcus Evans' 4th Annual Conference on Operational Efficiency in the Energy Trading Market, Houston, 17 March 2011).
[137] Commodity Futures Trading Commission and US Securities & Exchange Commission, 'Findings Regarding the Market Events of May 6, 2010' (Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, 30 September 2010).
[138] Corporations Act s 792A(a). This provision replicates §11A of the *Securities Exchange Act of 1934* (US) 15 USC.
[139] Explanatory Memorandum, Corporations Amendment (Financial Market Supervision) Bill 2010, 2.11.

Rule 5.9.1 does not require that the market participant act with intention or knowledge (or fail to so act). Further, application of the rule is objective: it imposes strict liability on market participants for acting and failing to act, and may be adjudged by whether the result of acting or failing to act is an unfair or unorderly market. The use of the term 'anything' also imports a wide scope into this rule. Doing or failing to do anything would include merely placing an order on behalf of a client.

The expressions 'fair and orderly market' (in rule 5.9.1) and 'integrity of the market' (in rule 5.5.2) are not defined in the ASX Market Integrity Rules or in Regulatory Guide 214 'Guidance on ASIC market integrity rules for ASX and ASX 24 markets.'[140] Indeed, the expressions are not defined in any ASIC market integrity rules.

The conception of a fair and orderly carbon market as posited by this thesis[141] applies to activity within the market, as well as to market design. Activity that manipulates, distorts or games the trading of AEUs in the market should not be acceptable. The spirit of trading within the markets should be fair to market participants and the consumers and businesses affected by it. The playing field should be level without undue advantage for any participant.

In practice, however, it may be very difficult for a broker to determine whether the broker's actions would result in an unfair or unorderly market. Rule 5.9.3 assists by prohibiting a market participant from taking advantage of a situation arising as a result of a breakdown or malfunction in the ASX's procedures or systems or an error in any trading message submitted by the market operator.

Nevertheless, there is a major and fatal limitation to rule 5.9.1: it does not apply to persons other than market participants. In its ordinary operation, it does not apply to Part 3 liable entities and non-liable entities (i.e. Part 3A deemed liable entities).

3.2 Markets Discipline Panel

Commencing with the introduction of the market integrity rules from 1 August 2010, ASIC established a *Markets Disciplinary Panel* (*MDP*) as a peer review body, independent of ASIC. Regulatory Guide 216, 'Markets Disciplinary Panel' explains that

[140] The terms 'fair and orderly market' and 'integrity of the market' are not defined in the rules they superseded: see Table 1, RG214.59. Cf Transmarket Trading case.
[141] Recall s 4.2 of the Introduction.

the MDP is not established by statute and instead relies upon delegation of functions and powers by ASIC Commissioners.[142] The delegation directs the members of the MDP to have regard to ASIC policies, but does not direct the MDP member on how to decide a particular matter (although, technically, a delegate of an ASIC Commissioner is subject to the directions of the ASIC Commissioner).[143]

ASIC intends to refer to the MDP all market conduct matters which ASIC considers could be dealt with by an infringement notice and/or enforceable undertaking.[144] However, the MDP will operate entirely in retro-active mode. An 11 stage process has been established,[145] with the MDP aiming to complete stage four (to convene a sitting panel of the MDP to consider the matter) within six months of identification of an alleged breach of the market integrity rules and to complete stage seven (reaching a decision as to whether or not to issue an infringement notice) within nine months.

As with rule 5.9.1, there is a major limitation to the reach of the MPD and hence its effectiveness – the MDP's powers and processes do not apply to persons other than market participants.

3.3 Equity derivative products

In June 2009, the Australian Treasury released a discussion paper for a framework for disclosure of equity derivative products, 'Improving Australia's Framework for Disclosure of Equity Derivative Products: Determining the degree of effective control obtained through equity derivatives and identifying appropriate disclosure requirements.' Although the paper was concerned with equity derivatives, two of its themes could apply with equal force to AEUs – ownership and control through derivative positions, and market making by conduct in derivatives.

The potential problem in the relationship between equities and equity derivatives was expressed as follows:

> Holders of direct stakes in listed companies and managed investment schemes are required to disclose substantial interests, but it appears that

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[142] Australian Securities and Investment Commission, 'Markets Disciplinary Panel' (Australian Securities and Investment Commission, Regulatory Guide 216, July 2010), RG 216.16.
[143] *Australian Securities and Investment Commission Act 2001* (Cth), s 119A(3).
[144] Regulatory Guide 216, RG 216.19. The infringement notice and enforceable undertaking under the Corporations Act are to be distinguished from the infringement notice and enforceable undertaking under the NGER Act and CPRS Bill (discussed in s 2.4 of chapter one).
[145] RG 216.31.

> holders of substantial equity derivative positions often are not, even though they may have effective control over those shares or interests. The [discussion paper] will explore whether disclosure of substantial equity derivative positions should be required to reflect the fact that, while equity derivatives give economic interests but not voting rights, they may give a degree of effective control over the referenced shares.[146]

As noted in s 2.4C of chapter one, a similar divide exists between the transparency that would be legislated for primary markets for AEUs and the opaqueness that may exist in the secondary and derivatives markets. Information content could be embedded in hedging positions, but it would not be disclosed. Practical considerations (of the type identified in the Treasury paper as pointing to real, effective control over underlying shares[147]) illustrate opportunities for gaming. This is because:

- there is no rule prohibiting a counter-party from selling an underlying parcel of AEUs to the holder of a long derivative position over the underlying AEUs – in these circumstances limitations on ownership proposed for participation in the primary market would be circumvented;
- as identified in s 1.7 of chapter one, the acquisition of AEUs by a counter-party would automatically remove those AEUs from the market place, thereby affecting supply and demand metrics and hence price; and
- 'failing to inform the market of the derivative may deny the market information which is relevant to the price and to the decisions of other investors.'[148]

The synchronisation rule proposed by this thesis would align activity in the derivatives market with liability under the CPRS, effectively removing the above divide.

3.4 Carbon Credits (Consequential Amendments) Bill 2011 (Cth)

At the same time as the Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth) (CFI Bill) was introduced into the House of Representatives on 24 March 2011, the Minister introduced the Carbon Credits (Consequential Amendments) Bill 2011 (Cth). Part 1 of Schedule 1to that Bill proposes amendments to the *Anti-Money Laundering*

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[146] The Treasury Australian Government, 'Improving Australia's Framework for Disclosure of Equity Derivative Products', above n 39, [7] (interpolation added). See also Jean-Pierre Zigrand, 'An Economist's View on Derivatives and Financial Stability' (Paper presented at the Derivatives in Crisis: Safeguarding Financial Stability conference, Brussels, 25 September 2009).
[147] Ibid [50], [53]-[56].
[148] Ibid. For a fuller discussion of similar reforms in Europe, see Holger Fleischer and Klaus Ulrich Schmolke, 'The Reform of the Transparency Directive: Minimum or Full Harmonisation of Ownership Disclosure?' (2011) 12 *European Business Organization Law Review* 121, especially the discussion (at 126) about gold-plating of transparency requirements in Germany.

and Counter-Terrorism Financing Act 2006 (Cth). These amendments would extend the definition of 'designated service' for the identification procedures established under the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth) to an Australian carbon credit unit to be defined (when enacted) in the CFI Bill and also to an eligible international emissions unit to be defined in the Australian National Registry of Emissions Units Bill 2011 (Cth) (discussed in s 2.1B of chapter one).

Unless the rules for account opening created by the Carbon Credits (Consequential Amendments) Bill 2011 (Cth) are repealed or amended upon the introduction of the carbon price framework, or alternatively, the carbon price framework replicates the approach, different standards and platforms for account opening and market supervision of emissions units are likely to emerge. Adopting the thesis proposals for improved Registry account procedures that (inter alia) empowered the regulator to determine the genuineness of entities would help harmonise the rules.

4. ACHIEVING GLOBAL REGULATORY HARMONISATION

Australia's Deputy Prime Minister and Treasurer, the Hon Wayne Swan MP stated that 'the regulatory shortfalls exposed by the global financial crisis must be fully and comprehensively remedied.'[149]

The consequences of the GFC have meant that domestic legislation and international rules and standards in place before the GFC have been re-evaluated in most developed jurisdictions and in Australia – including the problem with inadequate regulation and market oversight.

4.1 Synchronisation rule compared

The essence of a fair market is that no participant has an advantage. In order for there to be a fair carbon market, all participants in the Australian carbon market should face the same potential liability under the Australian ETS.

This thesis asserts that the playing field in the carbon markets will not be level as long as non-liable entities (such as financial intermediaries) are able to trade in AEUs

[149] Deputy Prime Minister and Treasurer the Hon Wayne Swan MP, 'A year since Lehman: Where to from here?' (Speech delivered at Chatham House, London, 4 September 2009).

alongside liable entities, without facing the same obligations that liable entities bear under the CPRS Bill.[150]

The carbon price framework is to commence with a fixed price with fettered ownership in a closed market: why does the rule need to change in conversion to a cap-and-trade ETS? If the rule does change, then the synchronisation rule removes a barrier to a fair market, by conditioning ownership of AEUs. Accordingly:

- in the case of Part 3 liable entities (other than eligible upstream fuel suppliers), liability would be determined by operational control of a facility in a covered sector directly emitting GHG above the specified threshold; and
- in the case of non-liable entities deemed Part 3A liable entities, liability would be determined by ownership of an emission unit, and the direct emission of GHG above the specified threshold.

Finance sector input to Issues Paper 2 of the Garnaut Review[151] was dominant:

> There was a clear message from some forum participants that financial markets should be free to operate unhindered and that Governments should not attempt to intervene in the market by setting or obstructing prices.[152]

It is legitimate to question why the Garnaut Review received 'a clear message from some forum participants that financial markets should be free to operate unhindered...'?[153] Driven by the same self-interest, did not the finance sector make the same plea in the equities and financial markets before the GFC?[154]

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[150] Megan Bowman (2010) called for the role and voluntary action of 'intermediary corporate actors such as finance industries and particularly the banking industry' in climate change mitigation to be clarified. Investors, financial intermediaries and speculators are intermediary corporate actors within Bowman's conception. Bowman labelled them as the 'finance sector.' Bowman stated:

> Moreover, the role of environmental law and policy in mobilising the banking industry needs to be clarified. Legislation that directly regulates the banking industry appears to be *en vogue* in the aftermath of the GFC. In the context of climate change, direct regulation needs to specify how banks can alter their practices and influence the GHG-emitting practices of others.

Megan Bowman, 'The role of the banking industry in facilitating climate change mitigation and the transition to a low-carbon global economy' (2010) 27 *Environmental and Planning Law Journal* 448, 451. Bowman also suggests that further research is warranted – this thesis answers this call.

[151] Garnaut, above n 46.

[152] Ibid.

[153] Ibid.

[154] See, eg, The Wallis Report, 'Final Report of the Financial System Inquiry' (Report, The Wallis Committee, 1997).

The financial sector argued that the ownership rules for the right to emit GHG might impact the efficiency of the market:

> Forum participants noted that undue free allocation of permits and potential restrictions on the use and trade of permits could hinder the financial markets capacity to facilitate price discovery and strong forward markets.[155]

With respect, it has become increasingly difficult for the financial sector to maintain this argument. The shift toward limiting participation in the EU ETS to operators and authorised investment firms and the proposal in the APA to close the US ETS to liable entities and regulated GHG market participants, both underpinned by concerns for market integrity, disprove the arguments.

The synchronisation rule would help arrest gaming, theft, fraud, manipulation and excessive speculation and other aberrant behaviour that would disrupt the Australian carbon market to the detriment of consumers, liable entities and Government revenue.

4.2 Carbon market integrity regime compared

An orderly carbon market is one that is free of abuse of ETS design rules by theft, fraud, gaming, speculation and manipulation. Such behaviour interferes with the orderly functioning of markets.

This thesis asserts that the Australian carbon markets will not be orderly as long as such abusive practices are not quarantined. This thesis acknowledges that in the EU and the US liability under the relevant ETS does not reach to the authorised investment firms or the regulated GHG participants.

The synchronising of liability under the proposed CPRS Bill for both Part 3 liable entities and Part 3A deemed liable entities is the point of strongest departure. Accordingly, this thesis addresses carbon market order by:

- introducing an enhanced carbon market integrity regime that increases regulatory oversight of the carbon market;
- empowering the regulator to intervene in the carbon market; and
- requiring carbon market participants to be permitted for trading.

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[155] Garnaut, above n 46, 6.

The regime would be reinforced by improved account opening procedures within s 147 of the CPRS Bill. Under the proposed rules the Regulator would be allowed to determine the genuineness of entities wishing to participate in the Australian ETS.

The enhanced carbon market integrity regime also would help arrest speculation and other aberrant behaviour that would disrupt the Australian carbon market to the detriment of consumers, liable entities and Government revenue.

5. CONCLUSION

This thesis argues that design of the statutory ownership rights in the AEU and the relationship of that right to the liability provisions of the Australian ETS will be core to the planned reduction in GHG emissions sought to be achieved by the Australian Government.

New legislation and standards around the world have heeded the lessons of the GFC.

The operative carbon markets in the EU ETS and the NZ ETS and the nascent US ETS have responded, as should, this thesis asserts, a carbon market in Australia.

While it is acknowledged that Australia has weathered the GFC better than most other developed States, the Australian (and indeed the global) economy is not yet stable.

This thesis argues that it is critical that future legislation for a carbon price framework in Australia be mindful of the progress in market oversight made in operational emissions trading schemes – progress that was spurred on by the lessons learned as a result of the GFC. Given the Australian Government's intention to introduce draft legislation in the Spring Sitting of Parliament (August-November 2011), it is likely (as noted in the introduction) that the relevant legislation will be based on the CPRS Bill examined in this thesis. This highlights the timely nature of the analysis in this thesis, and strengthens the need for critical appraisal of the market integrity rules of the Australian carbon market.

The analysis of the proposed CPRS, the EU ETS, the NZ ETS and the proposed US ETS in chapters one to three demonstrated the functional equivalence of these emissions trading schemes. This thesis has also demonstrated that global harmonisation reduces regulatory arbitrage and cross-border gaming opportunities – an important lesson from experience with operational emissions trading schemes documented in chapter four. Australia's interconnectedness – through potential direct and indirect linking of emissions trading schemes, and as noted above in this chapter through the GFC and post-GFC regulatory responses as part of the G20 – underscores the imperative to implement best practice and to achieve regulatory harmonisation. An Australian ETS that incorporates a synchronisation rule and an enhanced carbon market integrity regime would align its design with the EU and the US, and extend identical protections to Australian liable entities, businesses, consumers and the Australian Government. Updating the CPRS Bill to account for the lessons and the GFC would be in the public interest.

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CONCLUSION

CLOSING PANDORA'S BOX

1. FROM THESIS TO THEOREM

There are critical social choices yet to be debated if we can but turn our ears from the daily chanting of efficiency slogans[1]

This thesis demonstrates that the inherent commodification of the right to emit GHG in emissions trading schemes makes the design of the statutory property rights embedded in ownership of emissions units, and the relationship to the liability provisions of the ETS, core to the planned reduction in emissions.

The design of the broad-based ETS recommended by the Multi Party Climate Change Committee should reflect a design that closes any gateways for gaming as well as theft, fraud, manipulation and excessive speculation in emissions units.

Lessons from operative emissions trading schemes and the GFC reveal that unfettered ownership of AEUs in the primary, secondary and derivatives markets could open these gateways. Activities that disturb the objective and operation of the Australian carbon market and disregard the environmental aims that underpin its creation should be arrested in the public interest.

The carbon price framework announced 24 February 2011 advocates a market-based approach. Like the proposed CPRS, it would rely on self-assessment by liable entities. This thesis argues that the Australian carbon market should be a fair and orderly market so that the market price drives all economic agents to change their behaviour to meet the environmental objectives of the Australian Government.

This thesis asserts that Australian carbon markets would be fair and orderly if they:

- are an equal playing field for all market participants; and
- arrest abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units for purposes for which the Australian ETS was not created.

Accordingly, this thesis asserts that non-liable entities (such as financial intermediaries) should not be permitted to trade in the carbon market alongside liable entities, without liability attaching to them under the ETS commensurate with liable entities.

[1] Ezra J Mishan, *The Costs of Economic Growth* (Staples Press, 1967).

Part I (chapters one to four) analysed how the CPRS Bill (as the best proxy for the design of the carbon pricing mechanism) created the commodity (i.e. the AEU), and how the same objective was achieved in the EU ETS and the NZ ETS, both operational emissions trading schemes, and was proposed in the US ETS. Part I examined the functional equivalence of these emissions trading schemes, and their currency (AEUs, EUAs, NZUs, UEAs, CERs ERUs and RMUs).

The consequences of commodification have been explored in and between the CPRS, the EU ETS, the NZ ETS and the US ETS. This examination revealed six lessons from the carbon markets that fettered ownership would temper:

1. the fragmented global carbon market and nuances in design rules of emissions trading schemes attracts gaming and arbitrage by entities that do not face liability under any ETS;
2. the unfettered ownership of emissions units facilitate theft and fraud (and similar abusive practices);
3. the CPRS in its proposed design would not capture excessive speculation by non-liable entities;
4. financial intermediaries would find opportunities to profit by trading compliance units between the Australian ETS and international markets;
5. gaming behaviour would be incentivised by unfettered ownership; and
6. monetising carbon sequestration would not necessarily reduce emissions.

As a response to these lessons and the GFC, Part II introduced the proposed synchronisation rule and enhanced carbon market integrity regime legislation. Part II also provided a theoretical foundation for regulatory intervention in the carbon market and justified the recommendation legislation in the public interest of a fair and orderly carbon market.

Part III focused on the application of the synchronisation rule and enhanced carbon market integrity regime. The critique of the design rules of the CPRS Bill, and its interface with non-liable entities are justified by increased market supervision post-GFC and the problematic application of the ASIC market integrity rules operative from 1 August 2010. New rules in the EU and the US are targeting abuse of markets by gaming as well as theft, fraud, manipulation and excessive speculation. New approaches to carbon market oversight guide the approach to be followed in Australia.

If designed so that the AEU could only be traded by non-liable entities carrying the same potential obligation in the Australian ETS to monitor, report and acquit emissions as imposed upon liable entities, and in a market that embraces an enhanced carbon market integrity regime, Australia's carbon pricing mechanism would reflect best practice regulation in the public interest, connecting trading in the emissions units in all markets with the environmental aims of reducing emissions.

2. SUMMARY OF RECOMMENDED LEGISLATION

The recommendations of this thesis fetter ownership rights in the right to emit GHG.

Ownership of AEUs is recommended to be conditioned by:

- a synchronisation rule that tightens the rules for opening a Registry account and ties ownership of AEUs and liability under the Australian ETS; and
- the introduction of a new and enhanced carbon market integrity regime, modelled on market oversight provisions proposed in the EU and the US.

The draft legislation recommended by this thesis has been set out in detail in Boxes 5.1, 5.2 and 5.3 of chapter five.

There is no synchronisation rule proposed in the CPRS Bill, and the market integrity regime in the current Corporations Act and draft Corporations Regulations are limited. The synchronisation rule proposed by this thesis is a pre-emptive rule: that is, it is a rule fashioned to affect and modify behaviour before it occurs. The enhanced carbon market integrity regime proposed by this thesis embodies retro-active rules: that is, they are rules operative once an observed behaviour has occurred (although the recommended new Part 19A does attempt to permit ACCRA to intervene in real-time in certain circumstances).

A synchronisation rule in the CPRS Bill would tie obligations under the CPRS Bill with ownership of an AEU. The conditioning would be achieved by:

- strengthening the requirements for opening a Registry account, by inserting:
  - in section 147 of the CPRS Bill new subsections (ca) and (cb) in subsection 2; and
  - new subsection (8a);
- inserting a new Part 3A deeming certain non-liable entities to be liable entities within Part 3 of the CPRS Bill.

This thesis proposes new Registry account opening rules. In order to open a Registry account, an applicant who applies to open a Registry account must apply to ACCRA for a GHG permit, and in a statutory declaration to ACCRA:

- affirm that the opening of the Registry account is for the purposes of the CPRS Bill;
- disclose whether it is intended that the applicant shall be holding eligible emissions units in the Registry account for surrender, cancellation or for sale;
- disclose any prior criminal conviction or civil penalties, and if the applicant is an non-individual entity, any criminal conviction or civil penalties against its directors;
- agree that acquisition of Australian emissions units may result in a liability under the CPRS Bill (and consequently, the requirement to surrender AEUs); and
- acknowledge that failure to adhere to Registry account rules or meet any liabilities under the CPRS Bill may attract civil and administrative penalties and suspension or forfeiture of the Registry account.

The application for a GHG permit and the declaration, disclosure and agreement would empower ACCRA to review whether the applicant was a fit and proper person to hold a Registry account and thus to determine if the opening of the Registry account might be for illegal or undesirable purposes.

Any entity that owned an AEU, for the whole or part of an eligible financial year, would be deemed to be a liable entity. As a liable entity, the owner of the AEU would be required – on a pro-rated basis, just like liable entities – to monitor, report and acquit their scope 1 emissions. Their liability would be attributable to the period during which they owned the AEU. As for all liable entities, the acquittal would require the surrender of sufficient eligible emissions units, and in the event of a unit shortfall, there would be a unit shortfall penalty and make-good requirement.

An enhanced carbon market integrity regime would supplement the existing market maintenance regulatory framework and provide extensive investigation and information gathering powers to ACCRA.

A new Part 19A of the CPRS Bill would introduce the threat of regulator intervention, and establish a carbon markets advisory committee. Acting on advice from the proposed carbon market advisory committee, the regulator may intervene in the carbon market to provide protection to the Australian market and its market participants, including limiting participation in the carbon market to liable entities and regulated GHG participants, declaring a carbon market emergency which may permit the authority to suspend trading and cancel irregular trades, and/or making restoration orders.

3. CONCLUSION

> *Some people deliberately go close to the line dividing legal from illegal if they see a sufficient opportunity for profit in doing so. A few cross that line and, if caught, seek to justify their actions on the basis of formalistic arguments even when it is apparent that they have defeated the purpose of the law*[2]

Adoption of a synchronisation rule and an enhanced carbon market integrity regime by the Australian Government is consistent with policy to create an optimal Australian ETS.

Within the public interest theory, the synchronisation rule and enhanced carbon market integrity regime are justified in the public interest. They are recognisable as market maintenance intervention – framed as an anti-abuse response in order to assure a fair and orderly Australian carbon market. They reflect how commodification of the right to emit GHG should be conditioned for liable entities and non-liable entities alike: the rules fix identified problems and lessons learned in the carbon markets by conditioning behaviour disconnected from any environmental objective.

Why open Pandora's Box? Abuse of ETS design rules by gaming as well as theft, fraud, manipulation and excessive speculation in emissions units, permitted by unfettered ownership of the right to emit GHG by non-liable entities should be arrested.

Closing Pandora's Box is the proffered goal. It is also the essential aim for Australia's carbon price framework – the reduction in emissions, and hence, for the cleanest air.

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[2] *CSX Corporation v. The Children's Investment Fund Management (UK) LLP* No. 08 Civ 2764 (LAK) (S.D.N.Y. June 11, 2008), per Kaplan DJ, 1.

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